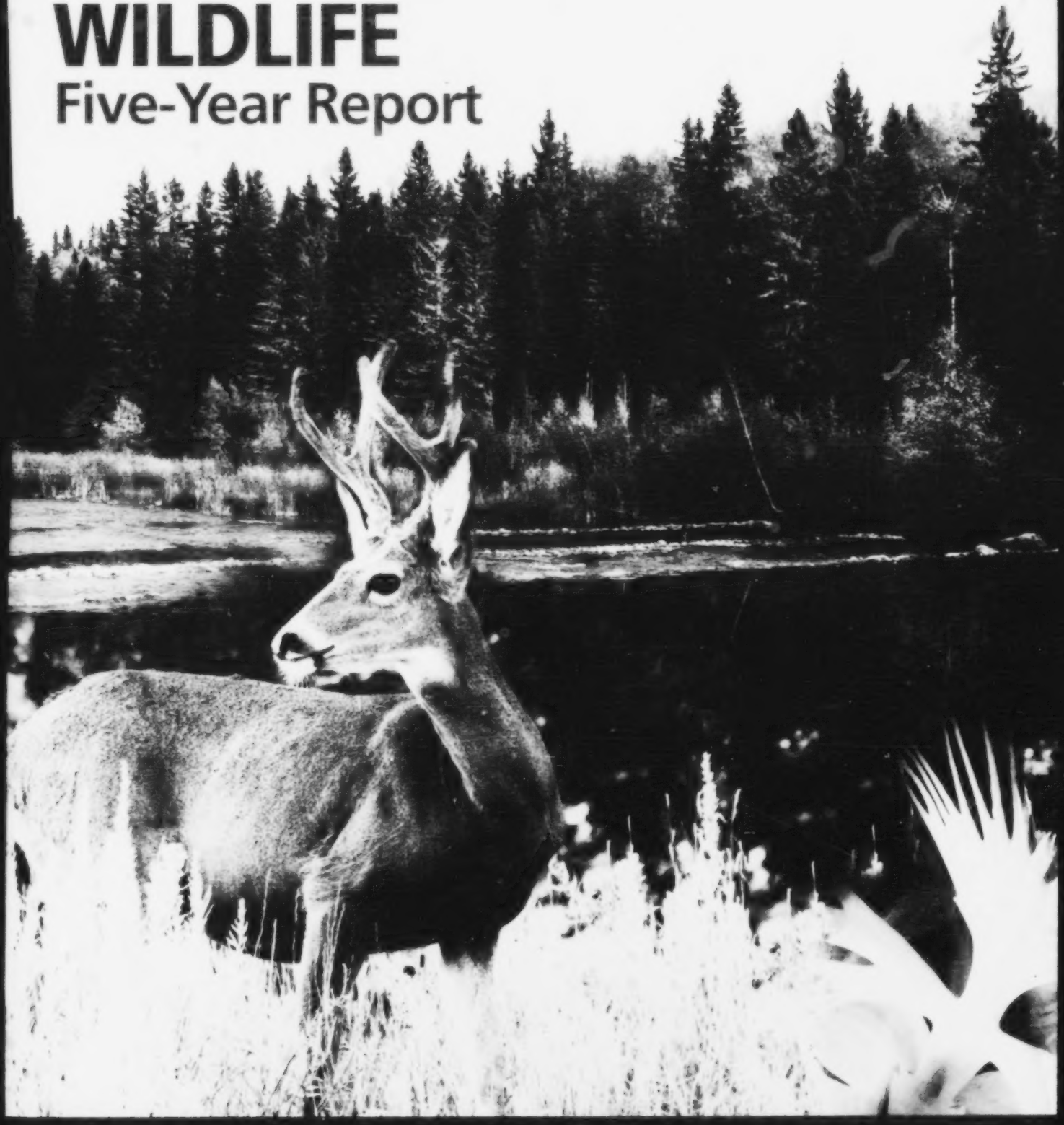
WILDLIFE
Five-Year Report



Protecting & Managing *our Future*

Manitoba

To His Honour

The Honourable John Harvard

Lieutenant-Governor of Manitoba

Your Honour:

I am pleased to present the Five Year Report on the Status of Wildlife to the Legislature for the period ending March 31, 2007.

Manitoba is fortunate to have many wildlife species. Some species are very common and abundant like the white-tailed deer, whereas the Western Prairie Fringed-orchid is considered to be a nationally and provincially Endangered species.

Many accomplishments and events have taken place over the last five years. Manitoba is proud to have proclaimed *The Polar Bear Protection Act* which raises the level of care and facility standards that must be provided for Manitoba polar bears held in captivity. These standards are considered to be the best in the world. Four rare plant species were identified during annual surveys; two species – Swamp Saxifrage and Iowa Golden Saxifrage were seen for the first time in Manitoba in 30 years. Smooth Goosefoot and Fascicled Ironweed were found for the first time in 50 years.

Delta Marsh was designated to Manitoba's wildlife management area system securing 11,000 hectares, of which 8,125 hectares were included in the Protected Areas Initiative. Also designated was the 128 hectare Hilltop Wildlife Management Area and an additional 256 hectares was added to Onanole Wildlife Management Area. Throughout Manitoba critical habitat, especially native grasslands, and habitats of unique / rare / endangered species, are being secured. A cost-shared program with the federal government was able to invest over $12 million in habitat stewardship projects.

Hunting is an important part of Manitoba's rich natural heritage. Manitoba Conservation introduced new or extended seasons for big game and game birds, a reduced licence fee for youth, expanded several game hunting areas to include Sunday hunting for big game and increased the opportunities for youth. In a partnership with the Manitoba Wildlife Federation, a mentored youth deer hunt was introduced.

Over the past five years, Manitoba has overcome many challenges as interest in wildlife conservation grows. Although we can not predict what lies ahead, we can through scientific knowledge and partnership prepare to address new challenges as they occur.

Yours truly,

Stan Struthers
Conservation Minister

To the Honourable Stan Struthers
Minister of Conservation

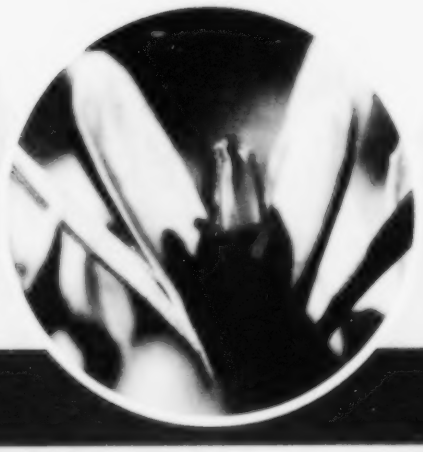
Sir:

I am pleased to submit the Five Year Report to the Legislature on Wildlife for the period from April 1, 2002, to March 31, 2007. This report identifies the wildlife management programs and the status of wildlife designated under *The Wildlife Act and The Endangered Species Act*.

Issues and challenges always arise in association with Manitoba's wildlife. The province will address these through the application of scientific-based best practices and working in partnership with other jurisdictions, agencies and concerned Manitobans.

Yours truly,

Don Cook
Deputy Minister



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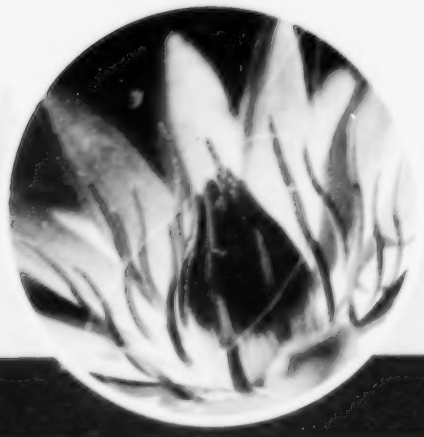


The Five-Year Report

The *Five-Year Report to the Legislature on Wildlife*, reviews the period between the last report and March 31, 2007.

The report is a requirement of *The Wildlife Act*. The Act specifies that the report include:

- a review of wildlife management programs and an assessment of their effectiveness
- an analysis of trends in, and a forecast of demands for, the use of the wildlife resource
- an evaluation of the capability of the wildlife resource in the province to meet anticipated demands
- a review of the status in the province of the animals listed under Schedule A and by regulation of *The Wildlife Act*

This report has further included a review of the status of species listed under *The Endangered Species Act*.

The discussion on the status of wildlife in Manitoba is based on the best available information for each species. For some species, a great deal is known, while for others, very little data may be available. Wildlife populations are dynamic and considerable change may be experienced from year to year in a given population. This report reviews general trends over the past five years and identifies issues that may be of significant concern in the next five years.

Wildlife and Ecosystem Protection Branch Staff and Programs

The Wildlife and Ecosystem Protection Branch is committed to carrying out the responsibilities as established in *The Wildlife Act and The Endangered Species Act* of Manitoba.

The Conservation Agreements Act was proclaimed in 1998. The Wildlife and Ecosystem Protection Branch administered this Act until responsibility was transferred to Manitoba Water Stewardship in 2003. A conservation agreement is defined as a written agreement between a landowner and a holder that creates a conservation interest in the land. A conservation interest is defined as an interest that imposes one or more restrictions on the use of land for the protection and enhancement of

- natural ecosystems
- wildlife or fisheries habitat
- plant or animal species

The Polar Bear Protection Act was proclaimed in 2002, to better control the circumstances under which orphaned polar bears cubs may be donated to zoos. This Act is also administered by the Wildlife and Ecosystem Protection Branch. The Act has not had to be invoked since coming into force, although regulations concerning polar bear facilities have since been adopted by zoos and zoo associations as the gold standard for new polar bear facilities.

ADMINISTRATION

The Administration section encompasses the office of the Wildlife and Ecosystem Protection Director, Legislative Unit, Branch Administrative Unit, and Marketing and Communications Specialist. It provides direction and leadership to branch policy and procedures, program direction and co-ordination, legislative development, marketing and communication strategies, scientific management and co-ordination and estimate preparation, budget allocation, control and management.

GAME AND FUR MANAGEMENT

The objectives of the Game and Fur Management section are to:

- assess the status of big game, game bird and furbearer populations, conduct consultations with clients and Manitoba Conservation staff, and recommend hunting and trapping seasons and bag limits to the Conservation Minister
- develop provincial guidelines and strategies for deer, elk, moose, black bear and wolf management
- develop and oversee policies and guidelines related to the management of the harvest of big game and game birds by resident and non-resident hunters
- create an annual hunting guide and a trapping guide, in which the public can find all the necessary information on hunting and trapping seasons and additional related regulations
- develop and co-ordinate implementation of policies and programs relating to human-wildlife conflicts and captive wildlife
- ensure the safety of people and minimize property damage from wildlife
- prepare recommendations as required relating to legislation, regulations, policy and public information in all areas of the section's responsibilities

HABITAT MANAGEMENT AND ECOSYSTEM MONITORING

The Habitat Management and Ecosystem Monitoring section is responsible for the broad range of issues and projects that deal with wildlife habitat. Habitat includes all the life-requirements of a living organism, including food, shelter and water.

Wildlife habitat is present on both Crown and private lands. The economic and social well-being of Manitobans is dependant on the sustainable use of these habitats. The objective of this section of the branch is to secure, manage and protect wildlife habitat:

- on Crown and private lands
- by revising regulations and developing policy
- through co-operative management and stewardship programs with government agencies, industry, non-government organizations and individuals
- in conjunction with the environmental assessment review process
- through the land-use rationalization and allocation process
- in conjunction with sustainable development initiatives

BIODIVERSITY CONSERVATION

Current objectives mirror the branch's commitment to the principles of sustainable development, the conservation of biodiversity and ecosystem management. The section's objectives are to:

- develop and maintain an integrated database on the status and occurrence of wildlife, plant communities and managed areas
- co-ordinate and participate in the inventory and monitoring of species of conservation concern, species at risk, and plant communities
- assess the status of all Manitoba native animal and plant species in conjunction with other government and non-government agencies, as well as concerned individuals
- develop provincial and national recovery and management strategies and guidelines for species of conservation concern
- prepare recommendations as required relating to legislation, regulations, policy and public information in all areas of the section's responsibilities
- issue permits under *The Wildlife Act*, *The Endangered Species Act*, and the Convention on International Trade in Endangered Species (CITES).
- serve as secretariat for the Endangered Species Advisory Committee (ESAC)

Legislation

During the period covered by this report, two major legislative initiatives occurred – *The Polar Bear Protection Act* and *The Wildlife Amendment Act*.

The Polar Bear Protection Act was proclaimed in 2002, in response to provincial concern over the status and use of polar bears in captivity, particularly bears that originated in Manitoba and were being held in captivity in other jurisdictions.

The Act governs the circumstances under which a polar bear may be placed in captivity, and the facility standards and level of care that must be provided for a captive polar bear. These standards are widely considered to be among the best in the world and have been adopted by the Association of Zoos and Aquariums in North America.

The Polar Bear Protection Act will not change the level of protection or legal status found under *The Wildlife Act*. This Act continues to prohibit the killing, capturing, possession, buying, selling, importing or exporting of a polar bear without obtaining a permit.

Manitoba Conservation was awarded the 2004 Polar Bears International – Excellence in Leadership Award for its work in developing the facility and husbandry standards in the Act. The award was accepted on behalf of the department by the director of Wildlife and Ecosystem Protection Branch.

In 2005, *The Wildlife Amendment Act* was enacted to improve sections dealing with public safety, enforcement, protection of wild animals and to provide for the administration of a hunting licence allocation system. The Act provides:

- Clear legislative authority for officers to deal efficiently and immediately with problem wild animals in situations affecting public safety or the protection of property.
- The protection of Manitoba's wildlife using a variety of enforcement techniques ranging from traditional uniformed officers to undercover operations.

- The use of pesticides, to control problem wild animals (as defined under the Act) by private landowners, to defend property, was removed. This reflects limitations found in federal legislation, public concern about pesticide use and the desire of this department to reduce the hazard that careless or unlawful pesticide use presents to non-target species.

Legislative references that provide for hunting licence allocations to Manitoba's outfitting industry are intended to ensure sustainability for an industry that provides important employment opportunities in rural and remote areas and allow for a fair economic return on public natural resources to Manitoba's economy.

WILDLIFE LICENCES AND PERMITS

Changes continue in the development of permits and licences, standardization of terms, conditions and legislated authority. In addition, regulations were reviewed annually to eliminate obsolete or unnecessary terms.

A summary of the permit types and the number of permits issued by year during the reporting period, is provided in Table 1 (on page 5).

TABLE 1 – PROVINCIAL PERMITS ISSUED UNDER *THE WILDLIFE ACT* FOR THE FIVE–YEAR PERIOD 2002 – 2007

Permit or Licence Type	Code	2002/03	2003/04	2004/05	2005/06	2006/07
Amphibian and Reptiles	AR	n/a	n/a	n/a	n/a	1
Dead Wild Animal Possession Permit (educational)	PD	14	14	11	9	1
Dead Wild Animal Possession Permit (personal)	PD	105	126	118	123	88
Applications Denied (dead animal)		11	15	4	6	6
Disabled Hunter Permit (permanent)	DH	121	53	34	45	30
Disabled Hunter Permit (discharge firearm)	DHF	5	8	46	9	5
Disabled Hunter Permit (revoked)		1	0	0	0	0
Applications Denied (disabled hunter)		47	19	16	18	21
Dog Trainer's Licence (non-resident)	DT	2	2	2	2	2
Dog Training Club Licence	DTC	2	3	4	3	3
Exotic Animal Import Permit	EIP	0	0	0	0	0
Field Trial Permit	FT	2	2	1	1	1
Live Exotic Animal Possession Permit	EPL	1	1	1	1	0
Live Wild Animal Possession Permit	PL	8	11	10	10	12
Power Boat in Marsh Permit	PB	2	1	1	1	1
Serve Meat of Wild Animal Permit	WM	4	1	1	2	2
Species At Risk Permit	SAR	5	5	2	4	3
Use Vehicle Off Designated Route Permit	DR	1	1	1	1	1
Wild Animal Capture Permit	CP	6	6	1	3	3
Wild Animal Export Permit	XP	581	711	1586	1616	1475
Wild Animal Import Permit	IP	17	16	10	13	13
Wild Animal Kill Permit	KP	2	5	3	0	2
Wild Animal Part Dealer Permit	DW	27	31	22	17	16

Wildlife Farm Licence	WFL	n/a	n/a	n/a	n/a	2
Wildlife Scientific Permit	WSP	21	21	21	25	14
Applications Denied (all others)		2	1	0	1	0
Game Bird Farm Licence	GBF	n/a	n/a	n/a	12	10
Game Bird Shooting Preserve Licence		n/a	n/a	n/a	2	2
Taxidermist Licence	TX	n/a	n/a	n/a	66	63
Tanner's Licence	TN	n/a	n/a	n/a	5	5
Total (provincial permits):		**987**	**1053**	**1895**	**1995**	**1782**

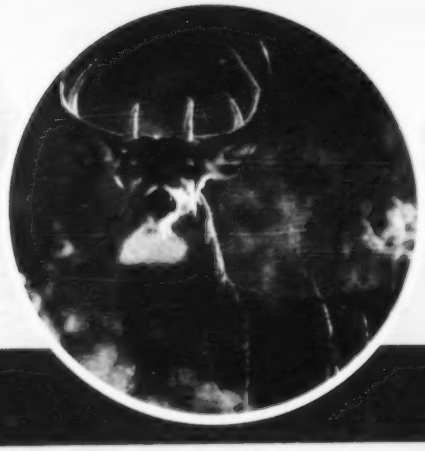
COMMITTEE ON THE INTERNATIONAL TRADE OF ENDANGERED SPECIES PERMITS (CITES)

CITES permits are issued under the authority of an international agreement that contributes to the protection of species of animals and plants considered to be endangered and threatened, by regulating and monitoring their use in international trade. Currently, there are more than 171 countries, including Canada, that have become signatories to the CITES agreement.

This program is controlled by the federal government in Canada under the *Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act*. Manitoba participates in the delivery of this legislation in the interest of providing service to Manitoba citizens. The province is authorized to issue permits, but this authority is restricted to issuing export permits. All other permits must be obtained from the CITES administrator's office in Ottawa. A summary of the number of CITES permits issued by year during the period covered by this report is provided in Table 2.

Table 2 – CITES Permits Issued in Manitoba from 2002 - 2006

PERMIT TYPE	2002	2003	2004	2005	2006
CITES Export	1237	1199	1249	1185	1177



Game and Fur Management

HUNTER EDUCATION

Hunter education is an important component of Manitoba Conservation's managed hunting programming and demonstrates the department's commitment to safe and ethical hunting. The Wildlife and Ecosystem Protection Branch assumed responsibility for administering the Hunter Education Program in 2006. Previously, it was administered by Regional Operations. All jurisdictions in North America require prospective new hunters to enrol in a hunter education course. In Manitoba, the requirement for hunters to be graduates of a hunter education course is mandated by provincial law under *The Wildlife Act*.

Since 1998, the program has been delivered by the Manitoba Wildlife Federation through a formal agreement with Manitoba Conservation. This arrangement has enhanced Manitoba's ability to deliver this vital program to interested individuals. Training courses are offered in both rural and urban locations. Each year, more than 2,000 hunters graduate from the program. Before being able to purchase a hunting licence, all new hunters in Manitoba are required to take a hunter education course – either the course currently offered by the Manitoba Wildlife Federation or an equivalent course from another jurisdiction. After successfully completing the course, they are eligible to purchase provincial hunting licences. The Manitoba Wildlife Federation and Manitoba Conservation, in partnership, continue to investigate new and better ways of training and educating youth and new adult hunters about Manitoba's exceptional outdoor recreational hunting opportunities.

HUNTING MANAGEMENT

Hunting is an important part of Manitoba's rich natural heritage. Manitoba Conservation is committed to:

- providing hunting opportunities for all Manitobans
- ensuring that hunting has a positive future in the province by exploring new and expanded hunting opportunities
- maintaining sustainable wildlife populations to meet the needs of First Nations and other aboriginal people

During the reporting period, initiatives such as the introduction of new or extended seasons for big game and game birds, reduced licence fees for youth, expansion of Sunday hunting for big game and increased youth hunting opportunities were introduced. In 2006, the downward trend in migratory game bird hunting permit sales was reversed when more duck and goose hunters went afield than in 2005. Efforts to maintain this positive growth trend are continuing.

Other initiatives directed at increasing opportunities for youth also continued. Young hunters aged 12 to 17, who had passed the Hunter and Firearm Safety Training Course, were able to purchase a special Youth Hunting Licence Package for $10. The package entitles them to harvest one deer, in any deer season, until the tag is filled, and to harvest and possess upland game birds inaccordance with bag limit and season restrictions. More than 3,000 Youth Hunting Licence Packages are purchased annually (see Table 3 on page 9).

Youth hunting provisions are extended to big game draw seasons. This allows a qualifying young hunter, not named on the draw application, to hunt and share the bag limit with an adult supervisor who was successful in the draw.

Waterfowler Heritage Days, a program to mentor young hunters, continued. This program, delivered by several conservation partners, provides qualifying resident youth with a special season to hunt and learn about the traditions of waterfowl hunting. Youth must be accompanied by an adult mentor who may supervise up to two young hunters at one time. In partnership with the Manitoba Wildlife Federation, mentored youth hunting for deer was introduced in 2006. All of these initiatives have received positive responses by youth hunters who have taken advantage of these unique opportunities.

The total big game and game bird hunting licence sales ranged between 82,000 and 89,000 each year during th reporting period.

Hunter participation in big game hunting has remained stable (see Table 4 on page 9). Approximately 48,000 deer licences, 4,300 moose licences and 3,500 elk licences were sold annually. The moose and elk seasons offered through the Big Game Draw are regularly over subscribed. Interest in primitive weapons seasons (archery and muzzleloader) continues to increase.

The location of outfitting activities and the non-resident big game harvest in each Game Hunting Area (GHA), are regulated by policies and procedures for allocating non-resident (foreign) deer, bear, moose and barren-ground caribou hunting licences. These policies and procedures help to create stability in the non-resident hunting industry, while ensuring that the demands of priority users are met. These policies and procedures were amended to further help stabilize the industry and provide more opportunity for First Nations people interested in wildlife outfitting to enter the non-resident hunting industry. By the end of the reporting period, some 5,600 deer, bear, moose and caribou licences were allocated to lodges and outfitters for sale to non-resident clients.

TABLE 3 – YOUTH HUNTING LICENCE PACKAGES				
2002/03	2003/04	2004/05	2005/06	2006/07
3,331	3,520	3,489	3,444	3,657

TABLE 4 – BIG GAME LICENCES SOLD RESIDENT AND NON-RESIDENT				
2002/03	2003/04	2004/05	2005/06	2006/07
64,154	64,555	66,945	66,861	70,800

Big Game Monitoring Program

Understanding population dynamics is essential to management. Manitoba Conservation conducts surveys to better estimate wildlife populations. The survey methods used in Manitoba include:

- winter aerial inventories to estimate animal abundance, sex and age composition, recruitment and distribution
- mail-out questionnaires to licensed hunters to estimate legal harvest levels
- biological specimen collection to assess relative health, reproductive state and disease condition of some species

AERIAL SURVEYS

Advances in technology over the reporting period, has allowed staff to revamp the aerial inventory program. Manitoba Conservation is able to systematically survey areas in a cost and time-efficient manner and achieve, in most cases, higher degrees of accuracy. In the past, crews spent weeks preparing maps for navigation and recording. Now, the task can be accomplished in a matter of days. The big game aerial-survey budget varies from year to year, affecting the amount of the province surveyed. The budget is provided primarily from the Wildlife Enhancement Fund.

Over the reporting period, 30 surveys were flown (north-west region – seven moose; north-east region – three moose; western region – four moose, three elk and one deer; central region – five moose, one elk and three deer; eastern region – two moose and one deer). In 2003 and 2004, funding for surveys was re-allocated to support the chronic wasting disease-monitoring program.

BIG GAME HUNTER QUESTIONNAIRES

Several thousand questionnaires are mailed out annually to estimate the number of days hunted and the number of animals taken in each game hunting area (GHA) for each hunting season. Beginning in 1999, information on abundance of black bears and white-tailed deer had also been collected, using an application of Fuzzy Logic. This has been extremely useful in documenting (at no additional cost) the gradual increase in black bears and the variability of white-tailed deer numbers in southwest and southeast Manitoba.

BIOLOGICAL SPECIMEN COLLECTION

Information about the health of animal populations was sought through a big game sample-collection program. Improvements in the procedures for attaining direct information on the status of big game populations by means of aerial surveys have proven to be most effective in evaluating the health of deer, elk and moose.

The biological specimen collection program is still in effect for black bears although teeth from male bears have not been collected or aged since 2005. Hunters who harvest a female black bear are asked to provide a pre-molar tooth and the reproductive tract. In appreciation, Wildlife and Ecosystem Protection Branch offers a crest for the pre-molar and a belt buckle for the reproductive tract. Based on the estimated harvest, about 80 per cent of the pre-molars and 75 per cent of the reproductive tracts are received. Using this information, we are able to estimate the number of cubs that may have been orphaned as a result of the spring hunting season. Moose and elk reproductive tracts are again being collected from females in game hunting areas (GHAs) 23 and 23A to monitor reproductive performance of these important species. This information has applicability to other populations within Manitoba.

Diseases in Wildlife

BOVINE TUBERCULOSIS (TB)

Four outbreaks of Bovine TB, involving 12 cattle herds, have occurred since 1991 in the Riding Mountain region. Thirty-five wild elk and seven wild white-tailed deer have also tested positive for the disease during that time. While Bovine TB has little long-term effect on wild populations, wildlife may act as a reservoir host.

Following the discovery of Bovine TB in several area cattle herds and wildlife in 2000, a Bovine TB Task Group was formed, comprised of Manitoba Conservation, the Canadian Food Inspection Agency (CFIA), Manitoba Agriculture Food and Rural Initiatives (MAFRI), Parks Canada Agency (PCA), Manitoba Wildlife Federation and Manitoba Cattle Producers Association.

A Manitoba Bovine Tuberculosis Management Program and implementation plan were developed by the group. The task group's goal is to eradicate Bovine TB from the Riding Mountain region ecosystem.

On January 1, 2003, CFIA established the Riding Mountain TB Eradication Area (RMEA) consisting of GHAs 23 and 23A. CFIA undertook active measures to detect and eliminate TB in livestock and reduce the spread of the disease to other areas. As a result of the suite of activities undertaken by all partners, CFIA upgraded the status of livestock in the RMEA from tuberculosis-accredited-advanced (very low prevalence) to tuberculosis-free as of August 31, 2006. The Bovine TB Management Program has been a success, but will have to be kept in place for several years to achieve its goal.

Manitoba Conservation has participated in the following activities to address Bovine TB in the Riding Mountain area:

1. Disease monitoring in elk and deer

Hunters have been required to submit heads and lungs from all harvested deer and elk in the area. PCA staff has been involved in live capture and blood testing of cervids within Riding Mountain National Park (RMNP).

Table 5 – Combined hunter harvested and live-captured cervids in GHAs 13A, 18, 18A, 18B, 18C, 23, and 23A

YEAR	Number of Samples Elk	Bovine TB Positive Elk	Number of Samples White-Tailed deer	Bovine TB Positive White-Tailed deer
2002/03	432	11	279	0
2003/04	476	5	568*	3
2004/05	240	5	1153	3
2005/06	240	1	1075	0
2006/07	317	3	723	0

*Includes 346 hunter – submitted and an additional 226 white-tailed deer collected through a special sample collection.

2. Elk and deer population monitoring and management

The Riding Mountain area elk population has been reduced to 2,500 through liberalized hunting opportunities. Active TB testing (live-capture) within RMNP has also assisted in targeted reduction within the high-prevalence Birdtail Valley area. Both activities have helped to lower the prevalence of TB in wildlife and reduce transmission of the disease between wildlife and domestic livestock.

Table 6 – RMEA Elk Population Estimates

YEAR	2002/03	2003/04	2004/05	2005/06	2006/07
Population (Elk)	3565	2567	2707	2100	2000

Table 7 – RMEA Elk Hunting Tags Available

YEAR	2002/03	2003/04	2004/05	2005/06	2006/07
Elk Tags	3260	3460	2030	2030	2030

3. Barrier protection fencing for stored hay

One hundred and fifty-five (155) hay-storage fence exclosures have been constructed with funding from Manitoba Conservation MAFRI, and PCA.

4. Field Research

- In 2002, a Master's degree student began investigating wolf diet and parasite loads in the Riding Mountain area.
- In 2003, a PhD candidate initiated research to understand elk movement and herd dynamics and another PhD study began to analyze wolf movements, all within RMNP.
- In 2004, a Master's student began conducting field studies to understand deer movements between RMNP and the Duck Mountain.
- In 2005, a Master's student began conducting field studies to understand elk movements in the Duck Mountain area.

5. RMNP Wildlife Laboratory Operations

All biological samples collected for the TB program are processed at a laboratory in RMNP operated by Parks Canada with some supplemental funding from Manitoba Conservation.

A number of other wildlife species were tested for TB to provide information on whether they may function as disease reservoirs, in co-operation with the Canadian Co-operative Wildlife Health Centre at Saskatoon.

Table 8 – Other Non-Cervid Species Tested for Bovine TB in RMEA

Species	Collection Period	Number
Badger	1998/06	4
Bear	1998/06	7
Beaver	1998/06	12
Bison	1998/06	14
Coyote	1998/06	192
Fox	1998/06	14
Lynx	1998/06	2
Mink	1998/06	14
Raccoon	1998/06	18
Richardson Ground Squirrel	2004	60
Wolf	1998/06	146 (2 positive)

6. Regulations

In 2002, Manitoba Conservation amended regulations to strengthen the prohibitions on baiting and feeding of deer and elk in the Riding Mountain area; and to require producers to remove any farm produce that is attracting cervids. Officers were also given the authority to prohibit hunting within 800 metres of an attractant.

Table 9 – Enforcement Summary of Baiting and Feeding Regulations in RMEA

YEAR	Warnings Issued	Charges Laid	Orders to Remove
2002/03	7	0	0
2003/04	3	1	0
2004/05	3	0	1
2005/06	6	2	4
2006/07	6	7	12

CHRONIC WASTING DISEASE (CWD)

Chronic Wasting Disease has been found in captive deer and/or elk in ten states in the United States – Colorado, Kansas, Minnesota, Montana, Nebraska, New York, Oklahoma, South Dakota, Wisconsin and Wyoming, and in two Canadian provinces – Alberta and Saskatchewan. The disease has also been found in wild elk and/or deer herds in ten states – Colorado, Illinois, Kansas, Nebraska, New Mexico, New York, South Dakota, Utah, Wisconsin, Wyoming, and in two Canadian provinces – Alberta and Saskatchewan. CWD has not been found in Manitoba.

The number and distribution of infected wild and captive animals is slowly increasing in North America. Without preventative measures, there is a risk that CWD will spread to Manitoba. CWD is most effectively managed when efforts are applied before, or when, the disease emerges, rather than after it becomes established in a given area.

In December 2000, Manitoba Conservation stopped permitting the importation of any native cervid falling under the authority of *The Wildlife Act*. In January 2002, Manitoba Conservation banned the importation of exotic cervids. Also, in 2002, the possession and use of a substance that contains urine, faeces, saliva or scent glands of a cervid (i.e. attractants and scents) was prohibited. As well, regulations restricting import of parts of animals were implemented including cervids killed in another jurisdiction.

Special provisions for allowing the entry of caribou and moose taken in areas of northern Saskatchewan and Ontario, Nunavut and Northwest Territories are set out in regulation.

Manitoba Conservation, in co-operation with Manitoba Agriculture, Food, and Rural Initiatives and the Canadian Food Inspection Agency, implemented an enhanced CWD surveillance program from 2001 to 2004. Hunters were requested to submit the heads of white-tailed deer harvested in south western and southern Manitoba. This surveillance program collected and tested approximately 700 samples per year. Since 2005, annual CWD surveillance has involved the testing of approximately 300 elk and white-tailed deer samples collected under the Bovine TB program in the Riding and Duck Mountain areas.

Manitoba Conservation has also been involved in collecting and testing any wild cervids exhibiting signs or symptoms that may be consistent with CWD. Since January 2001, fewer than ten such animals have been tested. To date, all 2,891 wild cervids Manitoba Conservation has collected and tested in Manitoba, have been negative for CWD.

Table 10 – Summary of Samples Tested as Part of Active CWD Surveillance in Manitoba (All negative as of August 2007)

YEAR	Elk	Moose	Deer	Mule Deer	Total
2002/03	134	0	495	0	**629**
2003/04	175	0	675	0	**850**
2004/05	123	0	555	3	**681**
2005/06	128	0	202	0	**330**
2006/07	81	0	320	0	**401**

Trapping Management

Trapping is a major commercial harvest of wildlife in Manitoba. Trapping seasons are established annually. Harvests of furbearers vary each year, depending on prices paid for raw fur, weather, environmental disturbances and the cyclic nature of some of the species like lynx and arctic fox. In Manitoba there are two types of trapping areas: the Open Trapping Area (OA; primarily the southern agricultural regions); and the Registered Trapline Area (RTL; the boreal forest and sub-arctic regions). On the whole, populations of those species taken for their fur are healthy and sustainable in Manitoba.

Furbearing animals remained important to the economic well-being of many Manitobans. Over 7,000 licensed trappers harvested pelts totalling an annual average value of $2.9 million, up from $2.7 million the previous reporting period. The number of OA trappers went up significantly from the previous reporting period. The number of registered trapline trappers was up slightly from the previous period.

RTL pelt sales accounted for about 60 per cent of the total provincial pelt sales. The average annual sales was $938 per RTL, similar to the $928 from the last reporting period. This increase was attributed to higher prices in general and an increase in coyote harvest, despite lower harvest levels for beaver and muskrat. Trappers in the OA took the balance of the fur. It should be noted, however, that only about two-thirds of trappers who purchase licences actually sell fur in a given year.

Unless otherwise indicated, harvest and value statistics are based on the complete fur year, which runs from September 1 to August 31 of the following year. The last complete fur year for this reporting period is 2005/06.

Table 11 – Average Number of Trapping Licences Issued

Type of Licence	2001/02 – 2005/06	1996/97 – 2000/01
Open Trapping Area Licence (OA)	5,390	4,655
Registered Trapline Area Permit (RTL)	1,707	1,835
Total	**7,097**	**6,490**

Table 12 – Average Annual Trapper-harvested Furbearer Harvests

Furbearer Species	2001/02 – 2005/06	1996/97 – 2000/01
Badger	159	135
Bear, Black	39	38
Beaver	21,055	27,410
Bobcat	17	8*
Coyote	7,460	2,691
Fisher	1,807	1,854
Fox, Arctic (including blue phase)	182	380
Fox, Red (including cross and silver phases)	2,362	2,006
Lynx	902	239
Marten	19,200	21,276
Mink	3,931	6,044
Muskrat	20,162	63,225
Otter	2,331	1,900
Raccoon	2,845	2,420
Squirrel	4,570	8,620
Weasel+	3,081	2,562
Wolf, Gray (Timber)	301	185
Wolverine	40	43

* first reported as separate species in 2000/01
+ includes all short-tailed, long-tailed and least weasels

Table 13 – Average Annual Total Value of Trapper-Harvested Pelts

Furbearer Species	2001/02 – 2005/06	1996/97 – 2000/01
Badger	$5,991	$3,803
Bear, Black	$2,957	$5,197
Beaver	$519,934	$833,731
Bobcat	$3,031	$621*
Coyote	$331,291	$85,512
Fisher	$79,144	$80,569
Fox, Red/ Cross/ Silver	$70,976	$45,116
Fox, Arctic/Blue	$4,012	$8,398
Lynx	$138,866	$18,213
Marten	$1,125,687	$982,433
Mink	$75,722	$124,240
Muskrat	$77,032	$223,424
Otter	$366,741	$149,666
Raccoon	$44,451	$44,477
Squirrel	$4,876	$9,784
Weasel+	$13,433	$8,495
Wolf	$34,084	$26,354
Wolverine	$8,563	$10,014
Total	**$2,908,175**	**$2,660,047**

* first reported as separate species in 2000-01
+ includes all short-tailed, long-tailed and least weasels

Late onset of winter and/or warm conditions were frequent during the latter part of the reporting period, causing reduced trapper effort and harvest in the RTL area. The harvest of furbearing animals is also closely related to market demand. Individual species pelt prices can fluctuate considerably from year to year. Marten continued to be the most-harvested and highest-value species in Manitoba in recent years.

Furbearer management programs ensure sustainable harvests. In most areas, beaver and raccoon could sustain much higher harvests than now occur. The gray (timber) wolf season remained closed in Open Trapping Zone 2A to protect the packs in Riding Mountain National Park. The season for lynx trapping was closed for the 1995/96, 1996/97, and 1997/98 seasons. Close monitoring will continue of cyclical species (including fisher and lynx) and species with narrow habitat tolerances (such as wolverine and marten).

The Furbearer Management Policy and Procedure Directive, first implemented in 1987, was revised and approved in January 2002. Developed by trappers and department staff, the policy contains the historic elements of the RTL Program (first developed in the 1940s) and incorporates traditional community practices with contemporary sustainable furbearer management. An on-going review during the reporting period is expected to result in some changes to the policy. Some concerns to be examined include residency of applicants for re-allocation of vacant registered traplines and the use of trapline cabins.

Furbearer Unit staff have been very active in providing harvest data to consulting companies working for First Nations, other aboriginal groups, Manitoba Hydro, university graduate students, other government departments, both provincial and federal, and departmental staff. Staff continued to work closely with the Manitoba Trappers Association (MTA), First Nations and aboriginal organizations and other trapper organizations, assisting them with their special program requirements.

Manitoba continued financial support to the MTA with a $60,900 annual grant. The funding helped the association defray costs for its work on behalf of Manitoba trappers including trapper and public education presentations.

The Agreement on International Humane Trapping Standards (AIHTS) was signed by Canada, Russia and the European Union (EU) in 1997. Had an agreement not been reached, EU Regulation 3254/91 would have banned imports of fur from these countries. This regulation would have affected most of the market and caused a collapse of the fur trade, ending a way of life in many remote portions of Manitoba where few alternate sources of income are available. Without the fur trade other direct costs associated with the control of problem furbearers, such as beavers, raccoons, coyotes and foxes would increase, by millions of dollars, and pose an additional burden on private citizens and all levels of government.

Throughout the reporting period, pressure from animal rights organizations declined in Europe and in Canada. Department staff was extensively involved in the trap-testing process through the Fur Institute of Canada, and in the national certification of humane traps through the Canadian Trap Certification Program. Two traps developed by Koro Traps of Manitoba were among the ones certified by Manitoba for use in Canada for fisher and muskrat.

Independent from market forces, natural population cycles and habitat conditions also affect furbearer populations. The local loss or alteration of habitats continues to have a significant influence on some species like marten, fisher, lynx and muskrat populations. The capability of these species to sustain harvests in the future could become limited, unless habitat factors are addressed. Forest fires also have adverse effects on furbearer populations, usually short term, as other furbearer species begin to occupy these areas within a few years after a fire.

Forestry operations can adversely affect upland furbearers such as fisher, marten and lynx in the short term. To help manage these two resources, the Forest Practices guidelines were developed (see Environmental Reviews on page 20).

The Problem Beaver Program was revised to focus more on winter activities (see page 19.)

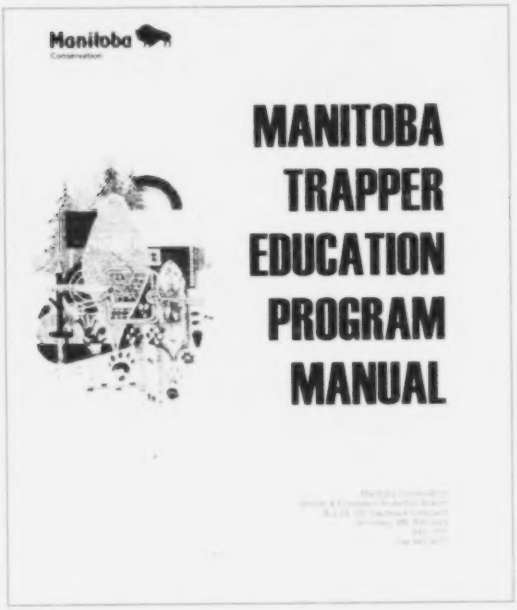
FURBEARER EDUCATION AND RESEARCH

A major focus of the furbearer management program has been public and trapper education promoting humane trapping techniques for both first-time and experienced trappers. During this reporting period, trapper education courses and workshops were made available within First Nations and other aboriginal communities. Both department and Manitoba Trappers Association (MTA) staff delivered programs.

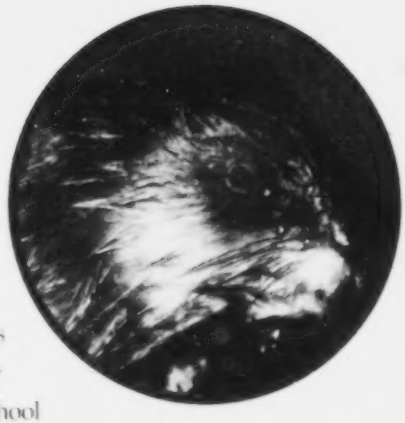
In 1988, Manitoba developed and implemented a mandatory trapper-education course for first-time trappers. During this reporting period, well over 1,400 new trappers passed the mandatory exam, an increase from 600 in the previous period. This increase in graduates was reflected in the number

of free Youth Trapping Licences/Permits, (issued to graduates, aged 12 to 17, of the Trapper Education Program). These permits increased each year from 94 in 2001/02 to 185 in 2005/06. The majority were issued as registered trapline permits.

Concerns about trapping and youth were brought forward to the Conservation Minister and Manitoba Premier by several First Nations. The Wildlife and Ecosystem Protection Branch and the Aboriginal Relations Branch met with community representatives and identified options that would benefit Aboriginal youth. It was determined that having access to the Alternative Land-Based Learning Curriculum in the schools would be a benefit to youth. Elders, would be key as instructors for the program.



Manitoba First Nation Education Resource Centre (MFNERC) and the Fur Institute of Canada (FIC) co-chaired the subsequent development of the Reconnecting with the Land Based Learning Curriculum. Manitoba approved a contract to the FIC to develop the curriculum, a key facet being the needs of a community. This curriculum, targeting senior year students, was developed with a smaller working group of representatives of the agencies involved. It is now approved for use in all Manitoba schools. It focuses on four areas: community studies, trapping, fishing and hunting. The community studies course is a prerequisite to any of the other curricula. Manitoba Conservation will continue to provide assistance and promote this curriculum as appropriate.



The MTA continued their school education program. This program was made possible through an annual grant. Their program has been met with a great deal of success, as schools annually have requested and received educational presentations on trapping and furbearer management.

The province continued to contribute financially to FICs humane trap research and development program and Wildlife and Ecosystem Protection Branch staff remained actively involved with the institute's board of directors and special committees.

Branch staff were directly involved with programs under the International Association of Fish and Wildlife Agencies' Animal Welfare Committee and the Fur Resources Committee.

PROBLEM WILDLIFE

Human-wildlife conflicts continue to increase and involve more staff involvement and effort to reduce these conflicts.

Predator/livestock problems caused by timber wolves decreased during the reporting period, averaging 124 complaints per year. In 1997, Manitoba Agricultural Services Corporation (MASC) introduced the Livestock/Predator Compensation Program that provided compensation to producers for losses or injuries to livestock caused by wolves, coyotes, fox, black bear and cougar. Since then, producers have been compensated for a total of over $2.2 million. In 2006, the Wildlife and Ecosystem Protection Branch initiated a series of predator-management workshops throughout Manitoba to promote appropriate livestock husbandry practices; teach residents how to harvest problem wolves or coyotes using approved hunting or trapping techniques; and promote non-lethal predator management techniques such as livestock guard dogs.

The department entered into an agreement with the Manitoba Trappers Association (MTA) for them to administer problem predator removal services. Under the terms of the agreement, agricultural producers, who had been issued a claim number by Manitoba Agricultural Services Corporation, could then contact the MTA and ask to be assigned a qualified trapper to deal with the specific predator problem. During the course of the agreement (April through September) the MTA dealt with 64 referrals (MASC claims) and removed 147 predators (24 wolves, 117 coyotes and eight foxes). An educational component was also included within the terms of the agreement. Seven workshops were held in chronic predator-conflict locations to provide information and instructions on animal husbandry and predator hunting and trapping techniques.

Big game depredation by elk and deer on agriculture crops remained relatively stable during the reporting period, averaging 349 complaints per year. This stability was largely due to sustained harvest by licensed hunters and First Nations people, and the promotion of best management practices to reduce crop or bale losses to deer or elk. The department also provided funding to producers in some chronic problem locations to install fences to protect their forage supplies.

Black bear problems increased four per cent during the reporting period as did the time and effort by staff to deal with black bear related issues. Department staff are frequently called on to trap and relocate problem bears to a remote location. On average, staff received 1,585 black bear complaints (range: 1,159 - 2,394), compared with 1,518 (range: 700 - 1,809) in the previous five-year reporting period. The department revised the problem black bear policy and procedure guidelines in 2006, which include procedures for relocating and dispatching problem bears and handling of orphaned cubs.

The increased number of problem bear reports required a management initiative to ensure human safety and minimize property damage. In May 2006, the department formally announced the Bear Smart initiative to provide a proactive approach to minimizing bear problems before they begin. The public is encouraged take responsibility for the role they unknowingly play in creating bear problems by using smart waste management practices, removing food attractants used for other wildlife species and remaining vigilant when travelling in bear country. Funding for this program was provided by the Sustainable Development Initiatives Fund. Allocated funding has increased since the inception of the initiative in 2005 from $50,000 to $125,000 in 2006. These funds were used to deliver a successive public awareness campaign, which included workshops, highway signs, printed literature, DVDs, and initiate a pilot study to investigate the viability of an automated waste management system in a user-intensive, high waste volume area (Grand Beach Provincial Park).

Increasing populations of migrant and resident Canada geese in urban areas like Portage la Prairie and Winnipeg are causing damage to private properties, raising public health concerns about water quality and increasing hazards for air traffic at the James Armstrong Richardson International Airport. The goose population has increased

from 99,000 in 1999 to over 132,000 in 2006. The department now permits and promotes waterfowl hunting in the RMs of Rosser and MacDonald (in those portions of the RMs that lie within GHA 38) to address goose crop damage. Wildlife and Ecosystem Protection Branch is working with Environment Canada and Transport Canada on a committee to address non-agricultural problems associated with urban Canada geese.

Since 1993, Manitoba Conservation has provided subsidies to municipalities and Northern Affairs community councils toward their problem beaver removal efforts. Since the inception of the program, nearly 95,000 problem beaver have been removed during summer and winter periods, at a cost of over $1.4 million. A Summer Problem Beaver Removal Program was initiated in 1993, with $125,000 made available. A program review with stakeholders in 2001, resulted in a second program added, the Winter Subsidy Program. The program now has current total budget of $250,000.

Municipalities and community councils are reimbursed $15 for each beaver taken under the program. As well, trappers in several Registered Trapline (RTL) Sections are offered a subsidy to remove beaver in winter when pelts are prime and have the highest value to the fur trade. Municipalities with the greatest problems in 2006/2007 were primarily in the western region around Riding Mountain National Park and Duck Mountains, including the following municipalities (in descending order): Mountain, Park, Gilbert Plains, Grandview, Ethelbert and Armstrong. The largest single subsidy expenditure is to the Duck Mountain RTL section in an effort to stem emigration of beaver out to the surrounding municipal lands.

Manitoba Conservation held training workshops in 2005 and 2006 on beaver management techniques to build capacity within these municipalities and agencies like Manitoba Infrastructure and Transportation (MIT), Conservation Districts and PFRA Community Pastures. This will help them address problem beaver situations.

Wild boar, originally imported into Manitoba as an agriculture diversification initiative, have escaped or been intentionally released into the wild. Due to their destructive feeding habits, aggressive characteristics, potential for carrying diseases and high reproductive capability, these feral pigs pose a serious threat to public safety, private property, the hog industry and native wildlife and natural habitat. Although feral pigs are seen occasionally in Manitoba, it is virtually impossible to estimate the number at large in this province given their secretive, nocturnal nature. Manitoba Conservation has declared the province a Wild Boar Control Area. This permits a resident of Manitoba to hunt and kill escaped wild boar running at-large anywhere in the province at any time of the year.

Table 14 - Summary of Subsidies Paid in 2002/03 – 2006/07

	Winter Extension	Summer Component	Winter Component	Total	Total Beaver Removed
2002/03		$59,195	$88,666	$139,438	9,296
2003/04		$58,560	$63,615	$122,175	8,145
2004/05		$52,755	$66,780	$119,535	7,969
2005/06		$62,490	$76,230	$138,720	9,248
2006/07	$4,665	$52,215	$64,185	$121,065	8,071

Habitat Management and Ecosystem Monitoring

ENVIRONMENTAL REVIEWS

The Wildlife and Ecosystem Protection Branch participated in the environmental assessment of over 300 development proposals, pre-screening and Crown land sales each year. Major projects reviewed included annual forest harvest proposals for Louisiana-Pacific, Tolko and Tembec. Proposals for the development of wind energy were another source of increased activity for review and comment.

The branch participated in the Forest Practices Committee, which develops Forest Practices Guidelines to be employed in Manitoba's forest industry.

CRITICAL WILDLIFE HABITAT PROGRAM (CWHP)

This cost-shared program is managed by Manitoba Conservation in co-operation with the Manitoba Habitat Heritage Corporation (MHHC). The two agencies work with other agencies on a project-specific basis to deliver CWHP projects to identify, preserve and manage critical habitats, especially native grasslands, and habitats of unique/rare/endangered species.

From 2002 to 2007 the branch continued to deliver integrated projects through the CWHP, many of which were supported by the federal Habitat Stewardship Program (HSP) for Species at Risk.

HABITAT STEWARDSHIP PROGRAM (HSP)

Between April 1, 2002 and March 31, 2007; a total of $12,190,500 was invested in habitat stewardship projects in Manitoba. This figure includes cash contributions from HSP ($3,885,000) and cash and in-kind contributions from Manitoba Conservation and MHHC ($6,170,400) and other partner agencies ($2,135,100). Agencies that provided significant contributions towards Manitoba HSP habitat stewardship projects included the Nature Conservancy of Canada (NCC), Manitoba Hydro, Manitoba Model Forest, Tembec, Tolko and the University of Manitoba.

Manitoba Conservation continued to be represented on the Manitoba Habitat Stewardship Program Working Group along with Manitoba Habitat Heritage Corporation (MHHC), Environment Canada, Parks Canada Agency and Fisheries and Oceans Canada.

The federal Habitat Stewardship Program for Species at Risk provided matched support for various Manitoba projects including several projects delivered co-operatively by Manitoba Conservation and MHHC, such as the mixed-grass prairie initiatives, species at risk inventories and MHHC prairie and riparian conservation agreements. HSP also provided matched funding for stewardship projects for piping plover, loggerhead shrike, prairie skink, wood bison and woodland caribou.

MIXED-GRASS PRAIRIE INVENTORY

Mixed-grass prairie once covered approximately 24 million hectares in Canada, from Alberta to south-western Manitoba. Today less than 25 per cent of this community remains in its native state. The comprehensive inventory of mixed-grass prairie in southern Manitoba continued as a priority CWHP project. Funding for this project was provided by Manitoba Conservation, CWHP and the Habitat Stewardship Program.

The information collected by the Mixed-grass Prairie Inventory is used to focus habitat conservation efforts, raise landowner awareness of the value of prairie lands and guide future management and stewardship activities.

Different areas were targeted each year. Areas with larger expanses of prairie were the focus in 2002 and 2003. Smaller, more isolated parcels were targeted in 2004 and 2005. In 2006, the long-term viability of prairie habitats was evaluated by revisiting some of the previously inventoried properties. This evaluation included a contact with the landowners to assess their continued awareness of the importance of their prairie habitats to species at risk.

Information from the Mixed-grass Prairie Inventory Project was used to guide the development of other initiatives in the mixed-grass prairie area of Manitoba including protection of prairie habitat on private lands through conservation agreements. The number of conservation agreements that were signed benefited significantly from the matched funding from the Habitat Stewardship Program. Data collected by the mixed-grass prairie inventory was also used to identify sites where the landowners were interested in twice-over rotational grazing management agreements.

MIXED-GRASS PRAIRIE GRAZING PROJECT

The Mixed-grass Prairie Grazing Project is also jointly funded by Manitoba Conservation, CWHP and the Habitat Stewardship Program. It promotes agricultural activities that result in sustainable prairie management practices and biodiversity conservation. Private landowners sign five-year agreements to implement twice-over rotational grazing on native grasslands, which makes them eligible to receive financial assistance to set up the necessary fencing.

Inventories conducted with the support of the CWHP showed that inappropriate grazing is one of the main threats to the remaining mixed-grass prairie habitat in agro-Manitoba and the wildlife species that they support. Manitoba's mixed-grass prairie provides very important habitat for many threatened and endangered grassland birds, such as the Sprague's pipit, Baird's sparrow, ferruginous hawk, loggerhead shrike and burrowing owl.

Between 2002 and 2007, a total of 35 agreements were signed with private landowners to implement twice-over rotational grazing on over 6,250 hectares.

Subsequent to the implementation of rotational grazing management on mixed-grass prairie pastures, they were assessed periodically to evaluate changes in grade or quality of the prairie and the effects on habitat quality.

MANITOBA TALL GRASS PRAIRIE PRESERVE

Less than one per cent of tall-grass prairie exists in its historical range in Manitoba. The Manitoba Tall Grass Prairie Preserve (TGPP) was established to conserve this endangered ecosystem. Agencies actively involved in the preserve between 2002 and 2007 included Manitoba Conservation, MHHC, the Manitoba Naturalists Society, Environment Canada and the Nature Conservancy of Canada. These preserve partners continued the commitment to work together to jointly manage preserve lands through a Tall Grass Prairie Preserve Management Committee.

In May 2003, a Memorandum of Understanding (MOU) was renewed for a five-year term, reaffirming the Tall Grass Prairie Preserve Management Committee as the authority that prescribes ongoing management of the preserve properties. Manitoba Conservation continued to chair the management committee, which developed annual work plans directing ongoing monitoring and management activities at the preserve. Environment Canada's Habitat Stewardship Program for Species at Risk, Nature Conservancy of Canada, and the Manitoba Naturalists Society, supported monitoring and management activities on the Preserve during this term. Manitoba Conservation provided a Green Team employee to assist with these activities and also covered the field expenses of the Tall Grass Prairie Preserve biological staff.

Permanent vegetation plots were monitored to determine plant species abundance and diversity in the tall-grass ecosystem. Those data were augmented with photographs of the plots. Weather data were collected from a weather station that was installed in 2004. Inventories for rare orchids such as the small white lady's slipper *(Cypripedium candidum)*, western prairie fringed-orchid *(Platanthera praeclara)* and great plains ladies' tresses *(Spiranthes magnicamporum)* were a main focus of the plant monitoring. In 2003, a purple orchid similar to the western prairie fringed-orchid was found for the first time.

A North America-wide bird monitoring program – Monitoring Avian Productivity Survivorship (MAPS) – was carried out at the preserve from 2002 to 2004. This involves banding small birds and provides critical, long-term data on population and demographic parameters for many species. New species were recorded on the preserve on an annual basis and added to the list for future monitoring.

Prescribed burning was also a key management activity on the preserve. Burns were undertaken to enhance the grassland components of various properties and to discourage aspen encroachment.

Invasive species, including monitoring and management, are an ongoing challenge at the preserve. There are over fifty leafy spurge *(Euphorbia esula)* patches on the preserve and each location is monitored on an annual basis to determine if it is spreading. Locating and mapping the occurrence of St. John's wort is an ongoing activity. Patches of leafy spurge were actively pulled to prevent further spread of this invasive species. Aspen girdling and other control measures were used to try to control its spread into the prairie.

The Nature Conservancy of Canada purchased an additional 4,400 acres of tall-grass prairie between 2002 and 2007 to increase the preserve holdings.

Each property was inventoried to record the plant communities as well as any special features including rare species such as the western prairie fringed-orchid and other provincially rare species.

Preserve biologists also assisted with the inventory of Crown lands within the preserve area in response to Crown land sale requests. Any species of conservation concern that were encountered during this process were recorded and the information was provided as part of a branch recommendation for the sale requests.

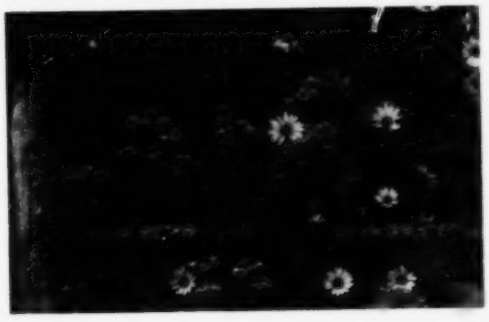
The annual Prairie Day continued to be a successful event at the preserve. It was well attended by local people as well as visitors from outside the area. The Manitoba Naturalists Society Tall-Grass Prairie School and Interpretive Program first began in 1998 and continued to be delivered to schools throughout the local region and in Winnipeg. Preserve biologists delivered presentations at the schools and teachers often booked a follow-up tour to the preserve. This program was set up to increase local awareness of the tall-grass prairie ecosystem. Guided interpretive tours that had been offered in July and August up to 2005 were discontinued in 2006 so more staff time could be devoted to biological monitoring.

Biological research is an important component of the preserve. Since 2002, 16 researchers have studied various components of the Preserve. These projects ranged from grassland bird and plant studies to studies of various insect species, including pollinators of rare orchids, as well as the various invertebrates that live in or on the soil.

URBAN HABITAT STEWARDSHIP PROJECT

The Capital Region Urban Habitat Stewardship Project was created as a mechanism to link the major agencies and non-government organizations involved in habitat stewardship in and around the City of Winnipeg. The objective of this project is to conserve, restore and enhance natural habitat areas in urban environments throughout Manitoba. The project was developed to promote urban habitat stewardship and create opportunities for groups or individuals concerned with habitat protection within Winnipeg and the rural-urban areas in Manitoba's capital region. Representation on the steering committee for this project includes: the Manitoba Habitat Heritage Corporation (Chair), the Manitoba Naturalists Society, the City of Winnipeg, Environment Canada, Ducks Unlimited Canada, Manitoba Intergovernmental Affairs and Trade, Manitoba Water Stewardship and Manitoba Conservation.

The main accomplishment of this project during this five-year term was the production and printing of *Naturescape Manitoba*. This book is the culmination of many years of work by representatives of the Fort Whyte Centre, Environment Canada, the City of Winnipeg, the Manitoba Naturalists Society and Manitoba Conservation. It was published through the Manitoba Naturalists Society in November of 2006 supported by funding from a variety of sources, and is now available at book stores.



THE CONSERVATION AGREEMENTS ACT

The Conservation Agreements Act was proclaimed in 1998. Although the act was moved to the Manitoba Water Stewardship in November 2003, the Wildlife and Ecosystem Protection Branch continued to act as the secretariat for the Conservation Agreements Board until 2007. The Act provides an effective tool for habitat conservation on private lands. A conservation agreement is "a written agreement between a landowner and a holder that creates a conservation interest in the land." A conservation interest is defined as "an interest that imposes one or more restrictions on the use of land for the protection and enhancement of a) natural ecosystems; b) wildlife or fisheries habitat; or c) plant or animal species."

The Conservation Agreements Board provides a forum for discussion of specific conservation agreements by interested parties, assists interested parties who apply to the board to consider the implications of a conservation agreement, and assists in the resolution of disputes between interested parties concerning conservation agreements.

During the period April 2002 to March 2007, the Conservation Agreements Board has met four times to review objections about conservation agreements. A total of 19 concerns were received but the majority were resolved between the conservation agency and the applicant, without the need for a Board meeting. This was at least partially due to an amendment to the Conservation Agreement Forms Regulation (Manitoba Regulation 149/98) in June 2004. At the request of the board, Schedule B, Notice of Intent to File a Caveat was revised. This was done to ensure the agencies proposing conservation agreements provided as much information as possible so that interested parties would have a clear understanding of the conditions and intent of these agreements. A map was also required by the revised regulation, to provide detail on the actual areas to be included in each proposed conservation agreement.

Conservation agreements have become a very effective conservation tool for Manitoba. As understanding of these agreements increased,

so has local acceptance. Since the Act was passed, over 400 conservation agreements have been registered. These protect approximately 67,000 acres in perpetuity.

WILDLIFE LANDS PROGRAM (WLP)

There are two regulations that govern the Wildlife Lands Program: the Designation of Wildlife Lands Regulation and the Use of Wildlife Lands Regulation. The Designation of Wildlife Lands Regulation defines the boundaries for Wildlife Management Areas, Special Conservation Areas, and various types of refuges. The Use of Wildlife Lands Regulation outlines the restrictions on selected activities within these areas to protect wildlife and/or its habitat. Amendments to these regulations typically occur on an annual basis.

WILDLIFE MANAGEMENT AREAS (WMAS)

Wildlife Management Areas (WMAs) are provincial Crown lands designated under *The Wildlife Act* for the conservation, protection and enhancement of significant wildlife habitats. WMAs are used for hunting, trapping and ecotourism, with significant benefits to local and provincial economies. Many of Manitoba's 80 WMAs, or portions of, are protected as part of the province's Protected Areas Initiative (see Figure 1 on page 26).

Extensive consultations with industry and conservation organizations has resulted in the protection of 132,000 hectares (ha) of the 2.5 million hectares WMA system from hydro-electric development, commercial forestry operations, mineral exploration and development and any other activities that significantly and adversely affect habitat as part of the province's protected areas. The Delta Marsh WMA (11,000 ha) was a major addition in 2006, of which 8,125 ha were included in the Protected Areas Initiative. The 128 ha Hilltop WMA near Clanwilliam was also designated in 2006 and an additional 256 ha parcel of land was added to the Onanole WMA.

Through revenue from hunting licence sales, the Wildlife Enhancement Initiative provided funding on an annual basis for maintaining and enhancing WMAs. Expenditures have been for weed control, habitat enhancement (e.g. control encroaching shrubs and trees on prairie sites to improve sharp-tailed grouse habitat) and infrastructure improvements in several WMAs. Standard boundary signs are produced each year for WMAs and refuges; some are to replace damaged or lost signs and others are used to mark the boundaries of recently established WMAs. The definition of boundaries and the placement of signs required an average investment of some $20,000 per year.

In drought years, such as 2003, additional haying and grazing was authorized for several WMAs.

A local advisory committee was established for the Lake Francis WMA in 2006. It continued to meet regularly to address concerns regarding water levels in the lake and low muskrat populations.

LAND MANAGEMENT AND USE

The unit reviewed over 500 land-use proposals each year to assess impacts to wildlife habitat. These included applications for general permits and leases, sales and exchanges of Crown land, Treaty Land Entitlement selections, municipal development plans, and zoning by-laws, and amendments. Policy proposals were also reviewed to assess the potential impact on wildlife, habitat, land management and use.

Figure 1: Wildlife Management Areas

Protected Wildlife Management Area
Wildlife Management Area
Wildlife Management Area Proposed for Protection
Wildlife Management Area Protected Excluding Petroleum

WATCHABLE WILDLIFE

The Wildlife Lands unit continued to play a major role in the enhancement of the Watchable Wildlife Program for Manitoba, in co-operation with Manitoba Culture, Heritage and Tourism and the Parks and Natural Areas Branch. During the reporting period, several site enhancements to improve wildlife-viewing facilities were funded by Manitoba Culture, Heritage and Tourism (e.g. trail improvements and interpretive signs at the Narcisse Snake Dens, an entrance sign for the Churchill WMA, interpretive signs for Whitewater Lake, an information kiosk at Delta Marsh and information kiosks at Oak Hammock Marsh). Hecla Provincial Park also benefited from the program, with the development of the Black Wolf Interpretive Trail and an outdoor sign cluster related to colonial nesting birds.

Some $160,000 per year has been invested by Manitoba Culture, Heritage and Tourism in various Watchable Wildlife projects throughout Manitoba during the reporting period. Wildlife and Ecosystem Protection Branch staff made a significant contribution to the program by identifying and prioritizing sites for development and ensuring the appropriateness and accuracy of the interpretive material. Some projects, such as the interpretive kiosk at Delta Marsh, were jointly funded by Wildlife and Ecosystem Protection Branch and Manitoba Culture, Heritage and Tourism, with design assistance provided by Parks and Natural Areas Branch. Heritage Marsh funds were used to enhance the parking lot and trail, with the kiosk and signs funded by the Watchable Wildlife Program. The Wildlife and Ecosystem Protection Branch invested an average of $20,000 per year in the program and a significant amount of staff time, both in the Wildlife Lands Unit and by regional wildlife staff.

Wetland and Waterfowl Management

MANITOBA HERITAGE MARSH PROGRAM

Manitoba Heritage Marsh Program designates Manitoba wetlands of extraordinary importance to wildlife as heritage marshes, to focus on sustainability of their health and biodiversity for the benefit of future generations. To date, eight wetlands have been declared heritage marshes, and a further 18 wetlands are listed as candidate heritage marshes. (see Table 15 on page 28).

Delta Marsh and Oak Hammock Marsh have been listed by the United Nations Ramsar Convention on Wetlands, which has afforded them significant international recognition.

Capital works, research and land acquisitions are supported through the heritage marsh program. Enhanced access and interpretive facilities are important projects that promote public educational and recreational use. Infrastructure such as dikes, ditches and dams are frequently required to properly manage and maintain water levels. Research is a necessary component for understanding wetland ecology so that appropriate management will be used. Many marshes have both public and private land holdings. Acquisition of private holdings by the Crown from willing sellers has occurred to consolidate properties into larger blocks. This benefits the design and implementation of management plans.

Table 15 – Manitoba Heritage Marshes

Heritage Marshes	Candidate Marshes
Delta Marsh	Big Point Marsh
Oak Hammock Marsh	Dennis Lake
Saskeram Marsh	Dog Lake
Summerberry Marsh	Hecla Marshes
Grant's Lake	Hunter-Maple Lake and Marshes
Proven Lake	Lizard Lake
Rat River Swamp	Marshy Point
Lidcliff Marsh	Narcisse Marsh
	Netley-Libau Marshes
	Oak-Plum Lake and Marshes
	Pineimuta Lake St. Martin
	Portia Marsh
	Reykjavik
	Shoal Lake (Interlake)
	Tom Lamb WMA
	Turtle River Marsh
	Vestfold Marsh
	Whitewater Marsh

Table 16 – Heritage Marsh Program Projects Highlights

Program area/marsh	Project
Botulism	Research to determine if picking up birds killed by botulism on Whitewater Lake, could help control its spread. It was found this did not help to control the spread of the disease.
Delta Marsh	Studies to examine the impacts of carp on the health and productivity of marsh ecosystems were carried out in partnership with the University of Manitoba and Ducks Unlimited Canada. It was found that carp are damaging the marsh ecosystems. If they could be excluded from the waters, marsh health and productivity would recover. Fall waterfowl staging counts were carried out annually. A feature sign was constructed at the PR 240 entrance to the marsh. In co-operation with the Watchable Wildlife Program, an orientation kiosk was added. High-resolution, colour, infra-red aerial photography was acquired for the entire marsh in co-operation with the University of Manitoba Delta Marsh Field Station, Ducks Unlimited Canada and Manitoba Hydro. A vegetation map was produced, which compares vegetation in 2003 to 1997. Delta Marsh was designated a Wildlife Management Area in 2006; 8,125 hectares of the 11,000 hectares WMA is protected under Manitoba's Protected Areas Initiative. Wildlife Habitat Canada helped fund the purchase of three parcels of land that were added to the Delta Marsh WMA. Heritage marsh funding also secured three other parcels in this five-year reporting period.
Lake Francis	Manitoba Conservation, along with Manitoba Water Stewardship, participated in an advisory group with local trappers and other interested parties to discuss water levels in the lake. The trappers want higher water levels to increase muskrat production, while cottagers and homeowners are concerned about flooding.
Manitoba Purple Loosestrife Project	Continued support for rearing and dispersing bio-control beetles for the control of purple loosestrife in marshes. The area infested with purple loosestrife in Manitoba continues to expand.
Oak Hammock Marsh	The Wildlife and Ecosystem Protection Branch participates in a management committee for Oak Hammock Marsh. An agreement with Ducks Unlimited Canada provides funding for operation, maintenance and enhancement of the WMA. Maintenance and enhancement of public viewing areas including interpretive trails has increased with additional support from Manitoba Culture, Heritage and Tourism. Maintenance and replacement of water control structures and dikes.

Program area/marsh	Project
Saskeram/ Summerberry Marshes	Support for the Pasquia Project to provide wetland and water bird inventory in a geographic information system format occurred in 2003 and 2004.
Whitewater Lake	Ongoing work to maintain and enhance the parking lot, interpretive signs, boardwalks and observation mound.

WATERFOWL CROP DAMAGE PREVENTION PROGRAM

The Canada-Manitoba Waterfowl Crop Damage Prevention Program, has operated since 1972, and is available to all Manitoba farmers to help prevent crop damage by feeding waterfowl. The program, operated by department staff, assists farmers in scaring waterfowl from unharvested crops by providing materials for scarecrows and deploying

noise-making devices such as propane scare cannons and pyrotechnics. In priority program areas, such as the Oak Hammock Marsh, the Pasquia Project Area (The Pas) and Lidcliff Marsh, the department undertook proactive practise scaring activities and provided alternate feeding sites, including lure crops and bait stations, to attract and hold waterfowl.

The program operated two bait stations, one at Lidcliff Marsh near Binscarth and the other in the Saskeram WMA near The Pas. At the peak of operations in the fall of 2006, 10,000 ducks used the Lidcliff site daily, while over 20,000 ducks used the Saskeram site. A total of eight Crown land lure crops were planted and maintained at important chronic damage areas, the Oak Hammock Marsh WMA and Grant's Lake WMA.

Under the terms of the agreement, the federal government maintained their annual contributions to the program of at least $151,000 per year. Although Manitoba matched federal funding, additional federal and provincial funding above the cost-shared amount varied, depending on available resources and other program priorities. Due to these federal/provincial agreements and cost-shared funding arrangements, expenditures remained relatively stable during the reporting period but, as 2004/05 illustrate, are susceptible to fall harvest conditions and the number of waterfowl in agro-Manitoba during the fall migration.

As shown in Table 17 an additional $50,000 was spent to support the program due to inclement weather that prolonged the fall harvest of cereal grains, and thus susceptibility to waterfowl damage.

Table 17 – Annual Federal and Provincial Contributions to Program Operating Budget

Fiscal Year	Federal Contribution	Provincial Contribution	Total Budget
2002/03	$151.0	$199.4	$350.4
2003/04	$151.0	$199.4	$350.4
2004/05	$200.2	$200.2	$400.4
2005/06	$151.0	$199.4	$350.4
2006/07	$0.0	$350.4	$350.4

THE MANITOBA HABITAT HERITAGE CORPORATION

In this five-year reporting period, the Manitoba Habitat Heritage Corporation (MHHC) co-ordinated and delivered habitat conservation programs for wetlands and associated habitats, riparian areas and habitats for species at risk. The Habitat Stewardship Program provided matched funding for riparian and species at risk Conservation Agreements. MHHC activities included field delivery of conservation programs, communications, co-ordination, administration and evaluation.

Up to March 31, 2007 MHHC's land-conservation activity summary totalled 206,590 acres of habitat on 2,838 parcels of land. Of that, 82,123 acres were added in this reporting period, primarily through conservation agreements (easements) as well as co-operative management agreements.

Established in 1986 by *The Manitoba Habitat Heritage Act*, MHHC's mandate is conservation, restoration and enhancement of fish and wildlife habitat. MHHC is administered by a board of directors appointed by the Order-In-Council and is responsible to the Manitoba Water Stewardship minister. MHHC is structured to focus conservation efforts on private land in agricultural regions of Manitoba.

MHHC has major responsibilities in three areas: North American Waterfowl Management Plan (NAWMP) implementation, riparian habitat enhancement and habitats for species at risk. The corporation provides banking and administrative support functions, including holding employment contracts for term staff, for Manitoba Conservation's Critical Wildlife Habitat Program and other activities.

Having the option of signing conservation agreements (CAs) has significantly influenced MHHC programs in this reporting period. This new private land conservation tool was made possible by the passage of the provincial *The Conservation Agreements Act* in 1999. CAs are easements that can protect habitat on private land but still keep the land in private hands. They are voluntary and are designed to target habitat without interfering with other productive uses of the land. This feature is important in agricultural areas where valuable habitat is often interspersed in tracts of good agricultural land, all of which are privately owned. The CAs that MHHC sets up are signed in perpetuity and will remain in force when these lands change hands.

MHHC has secured the largest number of CAs (335 CAs, totalling 55,595 acres) of any conservation agency or organization in the province and is one of the largest CA holders in Canada. In this reporting period a total of 265 CAs on 48,731 acres of habitat were secured. That total includes 151 CAs (24,596 acres) for wetland and associated habitats under the NAWMP program, 101 CAs (22,079 acres) for habitats important to species at risk and 10 CAs (861 acres) on riparian habitats. MHHC has also received 13 donated CAs, totalling 1,195 acres.

In the reporting period MHHC also purchased one property (160 acres) under NAWMP and received an additional six gifts of property (1,357 acres) from landowners.

NORTH AMERICAN WATERFOWL MANAGEMENT PLAN

Established in 1986, the North American Waterfowl Management Plan (NAWMP) is a continent-wide effort to restore and enhance waterfowl populations to the levels of the 1970s. This program has become a model for conservation at an international level, one which has established broad objectives but whose organizational structure also encourages partnerships and locally-based approaches to achieve conservation outcomes.

On behalf of the province, MHHC co-ordinates implementation of NAWMP in Manitoba and delivers field programs through its Green Acres and Potholes Plus programs, the latter in partnership with the Delta Waterfowl Foundation. MHHC's conservation activities complement the work of other NAWMP partners, Ducks Unlimited Canada (DUC) and the Nature Conservancy of Canada (NCC). Collectively, 356,000 acres of habitat have been secured (includes project areas for which agreements have since lapsed) over the entire period of NAWMP activity in Manitoba and an additional 1,306,000 acres of lands influenced by conservation farming activities. Many conservation districts, farm groups and wildlife associations have become significant partners.

A total of $122.43 million have been spent by NAWMP partners in Manitoba as of March 31, 2007. Of that total, 87 per cent has come from public and private sources from outside of Manitoba.

RIPARIAN HEALTH INITIATIVE

Healthy riparian zones – stream banks and lakeshores – provide crucial habitat for many fish and wildlife species and contribute significantly to the quality of our surface water. Most riparian areas in Manitoba's agricultural zone are privately owned and farmed, so co-operative approaches, and a wide array of partners, are needed to develop effective programs.

MHHC has delivered riparian-area conservation activities since 1993. The initial focus was on delivery of conservation demonstration projects, primarily grazing-management systems, with co-operating landowners but that has changed. During the 2002 and 2007 reporting period, MHHC's main functions were co-ordination of multi-partner activities on riparian and associated lands, delivery of riparian stewardship projects and delivery of a multi-partner riparian habitat extension initiative. Funding for these activities has been primarily from federal sources, including Agriculture and Agri-Food Canada, Fisheries and Oceans Canada and Environment Canada.

Some of the funding allowed MHHC to improve co-ordination of riparian activities in Manitoba through the establishment of the Riparian Health Council. The provincially based council has 12 agricultural and conservation agency participants and is chaired by the Manitoba Cattle Producers Association. MHHC provides secretariat services.

One of the council objectives is to use a more integrated approach to the development and delivery of co-operative programs for riparian and associated lands. An example was the delivery of cost-shared, riparian stewardship incentives, which was supported by field staff from four agricultural and conservation organizations, including MHHC. Stewardship options included grazing-management systems and forage buffer zones designed to enhance riparian functions and retain, or enhance, income-generating opportunities for landowners. Over the reporting period MHHC and its partners delivered 185 riparian stewardship projects that enhanced 318 kilometres of shoreline, 7,525 acres of riparian habitat and 44,856 acres of adjacent uplands. This program component ended on December 31, 2005 when the Federal-Provincial Agricultural Policy Framework began. The framework focuses on extensive environmental farm planning and includes financial incentives for implementation of beneficial management practices.

Biodiversity Conservation

The Biodiversity Conservation section's mission is to provide information and services for sustaining Manitoba's natural biological diversity. The section's activities can be grouped into four main program areas:

- inventory and monitoring species and plant communities
- assessment of the conservation status of wild species in Manitoba
- co-ordination of the preparation of recovery and stewardship plans for species of conservation concern, including species at risk
- management of the Manitoba Conservation Data Centre's biodiversity database and geographical information system (GIS), used as a decision-support system for sustainable development and conservation planning

Inventory and Monitoring Program

Inventory and monitoring of Manitoba's flora and fauna – particularly rare species, or groups of species using similar habitats – provides important baseline information on the status of the species and their habitat. Species found to be rare and in decline may be flagged as candidate species for listing under *The Endangered Species Act*. Species already listed under the Act are monitored to assess changes in status. Observations of rare species are entered into the Conservation Data Centre's database, to ensure that the presence of these species is factored into land-use planning decisions.

A significant improvement in this program was the expansion of record-keeping to better track how much time and effort was expended to search for rare species. It also tracks negative data – places where a rare species was looked for but not found. These key pieces of information indicate whether a species is truly rare, or if it has simply not been adequately searched for.

RARE PLANT SURVEYS

Surveys of rare plant species were conducted annually throughout the reporting period. Highlights include:

- Dramatically increasing the known area occupied by Buffalograss *(Buchloë dactyloides)*, from approximately one hectare of land in portions of six quarter sections, to over 400 hectares in portions of 49 quarter sections. Buffalograss is listed as Threatened in Canada under *The Species At Risk Act* (SARA) and has been recommended to be listed as provincially Threatened.
- Locating new sites where Hairy Prairie-clover *(Dalea villosa)* was found, and better documenting populations at a number of previously-known sites. This almost doubled the estimated overall population in Manitoba to over 20,000 plants. Hairy Prairie-clover is listed as Threatened in Canada under SARA, and has been recommended to be listed as provincially Threatened.
- Participating in a survey where federally Threatened Smooth Goosefoot *(Chenopodium subglabrum)* was found for the first time in over 50 years.
- Rediscovering nationally rare Swamp Saxifrage *(Saxifraga pensylvanica)* in Manitoba for the first time in more than 30 years, near the shoreline of Lake of the Woods.
- Documenting observations of nationally rare Fascicled Ironweed *(Vernonia fasciculata)* for the first time in more than 50 years, along the Rat River.
- Rediscovering a population of globally rare Iowa Golden Saxifrage *(Chrysosplenium iowense)* in the Duck Mountains – the first time the plant was seen in Manitoba in 30 years.

BREEDING BIRD SURVEYS

Wildlife and Ecosystem Protection Branch staff promoted and co-ordinated the involvement of Manitoba volunteers in the North American Breeding Bird Survey (BBS). The BBS documents changes in abundance and distribution of birds along predetermined routes that are surveyed using standard protocol at the same time of the year and generally by the same individuals each year. These surveys are especially useful for assessing the status and trends of birds that are not monitored adequately by other surveys. Local and national BBS data reveal that more species are increasing than decreasing in numbers. The data also reveals that certain groups, such as grassland-nesting species, have undergone particularly large, and in many cases significant declines, since BBS surveys began in 1966. A total of 39-55 BBS routes were surveyed annually from 2002 to 2007.

THREATENED GRASSLAND BIRDS MONITORING

Wildlife species that are native to North America's prairies have suffered greater losses since settlement than species from any other habitat. Several bird species have disappeared throughout much or all of their prairie range, and many others have declined so drastically they are currently considered to be of conservation concern throughout their Canadian range. This includes grassland species that were formerly widespread or abundant. Manitoba's Threatened Grassland Birds Program was initiated in the mid-1980s to monitor the status of a variety of grassland birds including several listed species (Burrowing Owl, Ferruginous Hawk, Loggerhead Shrike, Sprague's Pipit, Baird's Sparrow) and a host of other grassland species that are believed to be undergoing long-term declines in abundance or nesting range in the province. Objectives of the program include:

- obtaining baseline data on distribution, nesting ecology and limiting factors for grassland species of concern
- incorporating data on species distribution into databases to better identify and protect key nesting areas
- working with landowners and interest groups to carry out management efforts that will assist in recovery of these species

The status of species monitored by the Grassland Birds Program from 2002 to 2007 and management programs to stem declines of threatened species are discussed in the Recovery and Management section in this report.

EASTERN LOGGERHEAD SHRIKE MONITORING

Although most of Manitoba's Loggerhead Shrikes are found in south-western Manitoba (these shrikes belong to the nationally Threatened *ludovicianus* subspecies), pairs near Winnipeg and south-eastern Manitoba are believed to be a remnant population of the endangered *migrans* subspecies. The Eastern Loggerhead Shrike has declined to fewer than 100 pairs in Canada and is represented in Manitoba by a small nesting population near Winnipeg. Although fewer than a dozen *migrans* pairs were observed during annual surveys near Winnipeg in the late 1990s, this number declined even further from eight to five nesting pairs during the 2002 to 2007 reporting period. The Eastern Loggerhead Shrike project was partially funded by the Habitat Stewardship Program in 2004.

PIPING PLOVER SURVEYS

The Piping Plover is a provincially and nationally Endangered bird that in recent years has nested on sandy beaches along Lake Winnipeg, Lake Manitoba, West Shoal Lake, and occasionally along smaller lakes in southern Manitoba. Threats include loss of nests due to human disturbance in nesting areas, flooding of nests and habitat from storms and high water, vegetation encroachment due to stabilized water levels and nest depredation. Manitoba's Piping Plover population is believed to have been as high as 130 adults in the past two decades, but has declined substantially as evidenced by a drop from 60 plovers seen in Manitoba during the 1996 international census, to 16 observed during the 2001 survey, where only eight plovers were found in 2006.

In addition to international censuses, which are conducted once every five years, nesting surveys for Piping Plovers are conducted annually in Manitoba. Over this five-year period, the Piping Plover Stewardship Program was supported by matched funding from the Habitat Stewardship Program. Extended surveys were carried out in 2005 to find other active nesting sites in the province, but failed to locate any. Nevertheless, there are recent reports of nesting birds on Lake of the Prairies and a large increase in Piping Plover nesting populations elsewhere in the Northern Great Plains during the 2006 International Census. This news, in addition to successful management and guardian programs at Grand Beach in recent years all lend hope that Manitoba's nesting populations may recover when water levels on some former sites return to normal levels.

NOCTURNAL OWL SURVEYS

Owls are considered good indicators of healthy ecosystems because of their position at the top of the food chain and their dependence on relatively large landscapes. However, prior to 1991 there was little known about the abundance and population status of most nocturnal owl populations in Manitoba. As a result of their unique biology, most owl species, in particular those breeding in boreal forests are not well monitored by existing bird monitoring programs such as the Breeding Bird Survey and Christmas Bird Count. For these reasons, Manitoba established a volunteer-based nocturnal owl survey in 1991.

This roadside survey is conducted by volunteer citizen scientists across Manitoba and targets nocturnal migrating and breeding owls. It has been effective in:

- engaging citizen scientists
- educating the public on owl conservation
- monitoring most of Manitoba's owls
- collecting data that can be used to investigate owl-habitat associations

Table 18 – Summary of Nocturnal Owl Survey Results 2002 – 2006

Year	Volunteers	Distance Surveyed (Km)	Routes	Total Owl Detections	Owl Detections per Km
2002	198	2403	115	315	0.13
2003	162	1776	107	267	0.15
2004	150	1304	94	183	0.14
2005	102	1067	74	135	0.13
2006	91	886	80	262	0.30

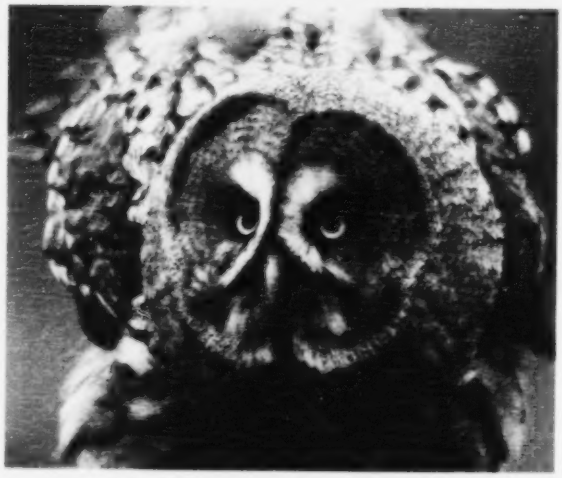
Manitoba's nocturnal owl survey completed another successful five-year period with hundreds of volunteers surveying 74 to 115 routes covering thousands of kilometres of roads and trails. The two most abundant species detected were the Great Horned Owl and the Northern Saw-whet Owl.

This survey has come a long way since 1991, thanks to the participation of over 650 volunteer owl surveyors to date. Spring 2006, marked the 16th anniversary of this effort which continues to demonstrate the value of citizen-based science monitoring programs. As in other years, owl survey information and experience has been widely shared with the public, students, other provinces and countries.

GREAT GRAY OWL MONITORING

A population of the Great Gray Owl in southeast Manitoba has been the focus of a 25-year monitoring and research program to help determine the lifetime habitat requirements of Manitoba's provincial bird. About 70 nest structures are checked for breeding owls each spring and prey populations are surveyed each fall. Breeding Great Gray Owls were numerous in spring 2002 and 2003, crashed in 2004 and 2005, then rebounded in 2006 and 2007. This population cycle correlated with similar population fluctuations of the owl's main prey, the meadow vole.

In 2002/03 captive Great Gray Owls in Manitoba and Ontario became infected with West Nile Virus and suffered 100 per cent mortality, including the well-known and loved Lady Gray'l. The spread of this disease among bird populations raised



concern that it might affect wild owl populations. The Wildlife and Ecosystem Protection Branch supported a collaborative research effort on the impact of the virus on owls between the University of Guelph, The Owl Research and Rehabilitation Foundation and the Assiniboine Park Zoo. On-going monitoring efforts have provided baseline data indicating that the impact of this disease on wild birds of prey in Manitoba and elsewhere may be negligible.

A Harvesting for Wildlife – Forest Management and the Great Gray Owl booklet was produced in co-operation with the Manitoba Model Forest. This booklet describes how owl-monitoring data provides evidence that the application of wildlife-forestry guidelines has created habitat for Great Gray Owls in Manitoba.

MANITOBA DRAGONFLY SURVEYS

Manitoba citizens are continuing to help Manitoba Conservation better understand the distribution, relative abundance and conservation status of dragonflies in the province. Specimens of dragonflies submitted by volunteers from around the province have been used to further define the range of a number of species found in Manitoba. The current Manitoba list has 98 species of dragonflies from nine families. Fifteen new species have been recorded in the province since the Manitoba Dragonfly Survey began in 1999.

Conservation Status Assessment Program

Manitoba Conservation has been an active participant in the development and application of provincial, national and global species' conservation status-assessment schemes. Underlying all of these schemes are basic assessment criteria including population size and trend, distribution, protection and threats. By maintaining information on these criteria for all Manitoba's wild species, the Manitoba Conservation Data Centre can co-ordinate their efficient use in various assessment processes described below.

ENDANGERED SPECIES ADVISORY COMMITTEE

The Endangered Species Advisory Committee, established under *The Endangered Species Act*, to advise the Conservation Minister on species at risk. Declaring a species as Extirpated, Endangered or Threatened affords it protection, and enhances its likelihood of survival in Manitoba. Population numbers and trends, distribution, habitat needs and threats are criteria used to assess the conservation status of species. Boreal woodland caribou was declared Threatened under the Act in June 2006. The Biodiversity Conservation Section prepares wildlife species status reports for the Endangered Species Advisory Committee.

FEDERAL-PROVINCIAL INITIATIVES UNDER ACCORD FOR THE PROTECTION OF SPECIES AT RISK IN CANADA

Participation on international and federal-provincial working groups and committees ensures that Manitoba's efforts to assess and conserve biological diversity are co-ordinated with those of other countries and Canadian jurisdictions. Implementing programs for species at risk and biodiversity demonstrates Manitoba's commitment to the Accord and the Canadian Biodiversity Strategy.

THE COMMITTEE ON THE STATUS OF ENDANGERED WILDLIFE IN CANADA (COSEWIC)

Departmental staff, and staff from Manitoba Water Stewardship participate in this national assessment process to make recommendations to the federal minister on species at risk, by reviewing and contributing to status reports.

REPORT ON THE GENERAL STATUS OF WILDLIFE IN CANADA

In 1998, the Canadian Endangered Species Conservation Council requested that federal and provincial territorial governments co-operate to assess and report on general status of wildlife (including plants) every five years, starting in 2000. A federal-provincial working group was established. The second (2005) report was released in spring 2006 and is available at www.wildspecies.ca. The 2005 report includes assessments of all vascular

plants, amphibians, reptiles, birds, freshwater and marine fishes and mammals, as well as selected groups of invertebrates, including dragonflies, tiger beetles, butterflies, freshwater mussels and crayfish. A significant amount of staff time was expended in 2006/07 to complete the report and to set work plans for the 2010 report. The results of this effort set conservation priorities for many species at risk and biodiversity programs and future assessments for listing under *The Endangered Species Act* (Manitoba). It is appropriate to acknowledge the myriad of amateur naturalists and professional biologists in Manitoba who donated their time and expertise to help with this and other provincial conservation status assessments. Over the years, hundreds of Manitoba citizens have been studying, collecting and identifying species that contribute to this process.

BIODIVERSITY CONVENTION OFFICE

Manitoba participates on a Federal-Provincial-Territorial Biodiversity Working Group that is implementing programs such as Bio-infomatics and Canada's Ecosystem Status and Trends Report, reporting on status and trends in biodiversity, monitoring alien invasive species and eco-citizenship, including stewardship.

Recovery and Management Program

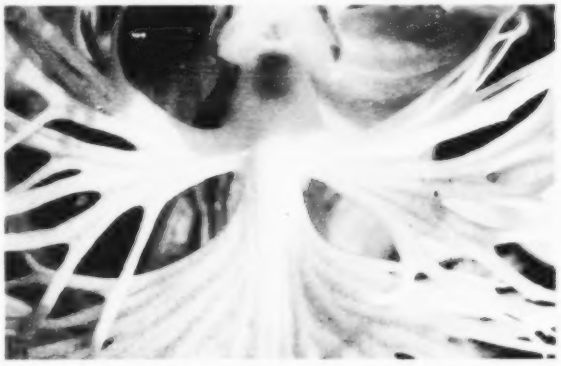
Each year Manitoba Conservation and its partners implement recovery and management efforts for hundred's of species of conservation concern in Manitoba. Manitoba citizens are essential to the success of this program because about half of all known occurrences of these species are on private land. Highlights of some of these efforts are presented below.

THE NATIONAL RECOVERY WORKING GROUP

Manitoba participates on a working group that helps the recovery of nationally endangered wildlife in Canada. Starting in 2006, Manitoba reported on its recovery efforts (funds and staff years) using the Recovery Information Management System (RIMS) database. This information will be incorporated into the National RENEW report to better reflect Manitoba's commitment to recovery efforts.

WESTERN PRAIRIE FRINGED-ORCHID RECOVERY

As the only jurisdiction in Canada where the species is found, Manitoba Conservation was identified as the recovery lead for Western Prairie Fringed-orchid, and was responsible for the production of a National Recovery Strategy. Wildlife and Ecosystem Protection Branch staff produced the strategy and submitted it to Environment Canada for review and approval. The final strategy is posted on the Government of Canada's SARA registry, www.sararegistry.gc.ca.



Research on the pollination biology of Western Prairie Fringed-orchid continued over the reporting period. Two Manitoba graduate students examined the orchid's moth pollinators and the habitat the moth species require during their various life stages. Better understanding of these relationships is key to ensuring healthy pollinator populations are maintained.

In summer 2006, road allowance maintenance inadvertently resulted in a number of flowering Western Prairie Fringed-orchids being mowed. The incident led to greater communication and co-operation between Wildlife and Ecosystem Protection Branch, the Manitoba Tall Grass Prairie Preserve, Manitoba Infrastructure and Transportation and the Rural Municipalities of Stuartburn and Franklin, where a number of plant species at risk are found in road allowances. Wall maps were produced and distributed to the two

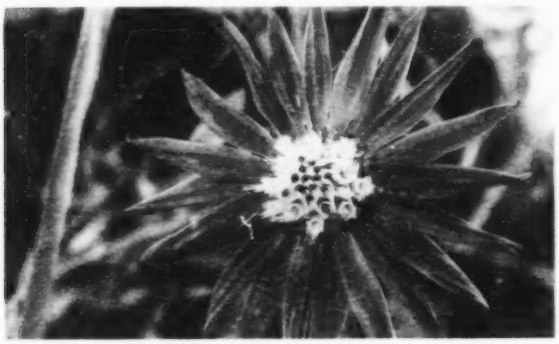
RMs showing maintenance workers and municipal employees where sensitive species can be found and when to avoid activities that may harm them.

SMALL WHITE LADY'S-SLIPPER RECOVERY

Wildlife and Ecosystem Protection Branch staff worked with Environment Canada to produce a draft national recovery strategy for Small White Lady's-slipper. The final version will be available after consultation concludes with Walpole Island First Nation in Ontario, where another population of small white lady's-slipper is found.

WESTERN SILVERY ASTER RECOVERY

Wildlife and Ecosystem Protection Branch and the Ontario Ministry of Natural Resources staff jointly produced a draft national recovery strategy for Western Silvery Aster.



Between 2002 and 2007, most known sites have been monitored. Several new sites have also been discovered because of Conservative Data Centre (CDC) rare plant surveys, as well as through reports from the public, from private consultants and Tall Grass Prairie Preserve (TGPP) staff. Stewardship activities over that period have focused on increasing awareness of the species, including discussions with staff of Birds Hill Provincial Park and discussions with Roseau River First Nation, where the species is found.

OTHER PLANT SAR RECOVERY PROGRAMS

Manitoba is a member of the Recovery Team for Plant Species at Risk in Prairie Canada, along with counterparts from other provinces and federal agencies with a stake in recovery of species at risk. The team has developed draft national recovery strategies for Buffalograss, Hairy Prairie-clover, and Western Spiderwort, and is working together on a variety of projects of mutual interest such as survey protocols and mitigation guidelines.

Wildlife and Ecosystem Protection Branch staff also participated in the development of a draft national recovery strategy for the Flooded Jellyskin lichen.

Wildlife and Ecosystem Protection Branch has made an effort to raise awareness of species at risk and their plight. Landowners that gave surveyors permission to visit their land were provided with a summary of findings, fact sheets on the species, and information on programs such as Conservation Agreements. In turn, landowners were asked to provide additional information on past and current management practices on lands supporting species at risk and to provide any observations of threats such as invasive species.

PIPING PLOVER RECOVERY ACTION GROUP

In 2001, the Manitoba Piping Plover Recovery Action Group was established to provide support, guidance and co-ordination to Piping Plover recovery efforts in Manitoba. This team is comprised of a variety of federal, provincial and local stakeholders. It includes representatives from Manitoba Conservation, the Canadian Wildlife Service, Manitoba Parks, Manitoba Hydro, Portage Natural History Group, as well as dedicated guardian volunteers. The focus of this group is to direct conservation and recovery activities for the Piping Plover and its habitat.

EASTERN LOGGERHEAD SHRIKE RECOVERY ACTION GROUP

The Eastern Loggerhead Shrike Recovery Action Group was established in 2000 to provide support and guidance to recovery efforts in Manitoba. This team is comprised of a variety of provincial and local stakeholders, and includes representatives from Manitoba Conservation, the City of Winnipeg, Manitoba Hydro, Portage Natural History Group and other interest groups or individuals.

PEREGRINE FALCON RECOVERY

Two non-government groups assist Manitoba Conservation by implementing Peregrine Falcon recovery activities. The Manitoba Peregrine Falcon Recovery Project raises funds and co-ordinates monitoring and banding of breeding falcons in Winnipeg and Brandon. The Parklands Mews Falconry and Birds of Prey Education Centre have established a captive breeding and rural release program in Manitoba. Both groups conduct public education and outreach programs.

GRASSLAND BIRDS RECOVERY ACTIVITIES

Manitoba's Grassland Birds Program was initiated in the mid-1980s to monitor the status of grassland birds in the province and to work with landowners and interest groups to carry out management efforts that will assist in recovery of these species.

Efforts have been stepped up by Manitoba Conservation and other conservation-oriented groups to provide better protection to nesting pairs of Burrowing Owls by installing additional predator-proof artificial nesting burrows in nesting areas and securing long-term land easements to secure grasslands in key nesting areas.

BOREAL WOODLAND CARIBOU

In 2006, Manitoba Conservation released *Manitoba's Conservation and Recovery Strategy for Boreal Woodland Caribou*. This document is based on scientific research, knowledge and experience gained from co-operative partnerships with industry, the Habitat Stewardship Program, First Nations and NGO's. The strategy is based on five guiding principles:

- ecosystem management
- the precautionary principle
- adaptive management
- sustainability
- commitment to caribou maintenance

The goals are the management of boreal woodland caribou habitat on all existing ranges to support and sustain populations inhabiting those ranges.

The release of this document was followed by a ministerial announcement officially listing the boreal woodland caribou as a threatened species under *The Manitoba's Endangered Species Act*.

WOOD BISON

The establishment and conservation of the Chitek Lake herd was Manitoba's contribution to the National Recovery Plan for Wood Bison and was partially funded by the Habitat Stewardship Program. Aerial surveys are conducted each winter to assess growth of the herd, which is now estimated to be between 250 and 275 animals. The ongoing relocation of radio-collared wood bison in the Chitek Lake area has permitted the mapping of the herd's core range and documented its expansion as the herd grows. In 1999, the Chitek Lake Park Reserve was designated with boundaries that include most of the core range, in part to provide protection for the wood bison herd.

Chitek Lake is located within the traditional use area of Skownan First Nation. Manitoba Conservation is working co-operatively with Skownan First Nation to develop a Chitek Lake Wood Bison Management Plan. The committee met several times per year to work on the plan and to discuss management issues as they arose.

DAKOTA SKIPPER AND OTHER LEPIDOPTERA SAR RECOVERY

A long-term project was initiated in co-operation with researchers from the University of Winnipeg to examine the potential for re-establishing a healthy population of Dakota Skippers at the Tall Grass Prairie Preserve. Before a re-introduction can proceed, researchers must first determine what factors led to the extirpation of the species and be sure that appropriate habitat still exists. Re-establishing a population of Dakota skipper in protected prairie habitat is an important component of recovery for this species. Wildlife and Ecosystem Protection Branch staff have also provided information to Environment Canada to help prepare draft recovery strategies for the Ottoe Skipper and the Powesheik Skipperling.

NORTHERN PRAIRIE SKINK

The Manitoba Prairie Skink Recovery Team completed a draft Recovery Strategy and Action Plan. Work continued on developing guidelines for citizen-based monitoring, a fact sheet and habitat stewardship guidelines. The Habitat Stewardship Program provided funding in 2003-04 to support this initiative. The team also identified future research priorities and outreach opportunities. Field inventories, population monitoring and research were conducted with future plans to expand research efforts to include the Hognose snake.

Conservation Data Centre

The Manitoba Conservation Data Centre (CDC) is the provincial storehouse of information related to biodiversity conservation and species at risk in Manitoba. The CDC is a member of NatureServe, a network of 74 similar centres in the western hemisphere that employ common data management systems and share a biodiversity data model. Common standards and systems allow the rollout of information across jurisdictional boundaries. Information on the status of a rare species in Manitoba can be easily compared with information from Ontario, Saskatchewan or Minnesota. This has positioned the CDC to be a key provider of biodiversity information, particularly for species at risk, to provincial, national and international partners.

The Manitoba CDC works with NatureServe and other CDCs to develop information products, data management tools and conservation services to help meet local, national and global conservation needs. The objective, scientific information about species and ecosystems is used by all sectors of society – various levels of government, conservation groups, corporations, scientists and the public – to make informed decisions about managing our natural resources. Examples include:

- Environmental impact assessment – CDC rare species information is a key component in reviewing *Environment Act* proposals. The CDC database is also consulted by Wildlife and Ecosystem Protection Branch staff during departmental reviews of proposals.
- Status assessment – COSEWIC recognizes that CDCs are often the custodians of the best available information on candidate species, and instructs authors to contact the CDC when writing status reports. The CDC provides authors with detailed information to assist in fieldwork and in assessing the status of species and usually gets some new information back from authors afterward.
- Project screening – Prairie Farm Rehabilitation Administration (PFRA) regularly consults the CDC to determine whether proposed projects might encounter rare or at-risk species, before

providing funding to landowners for adopting PFRA beneficial management practices.

- Protected areas planning – known locations of rare and at risk species are used by the Protected Areas Initiative to determine whether new protected areas such as provincial parks and ecological reserves are capturing key biological features.

The CDC collects and manages detailed local information on Manitoba's plants, animals and ecosystems. It lists all plant and animal species and plant communities, also known as elements of biodiversity, found in Manitoba. It assigns each of these elements a conservation status rank; based on how rare they are in the province. It then collects detailed information on where the rarest of these elements have been found. The locations where these rare species have been observed are called element occurrences. They are mapped and documented in a Geographic Information System (GIS) and database application called Biotics. Biotics was originally built for the Manitoba CDC by a Winnipeg-based company. It is now NatureServe's international standard application.

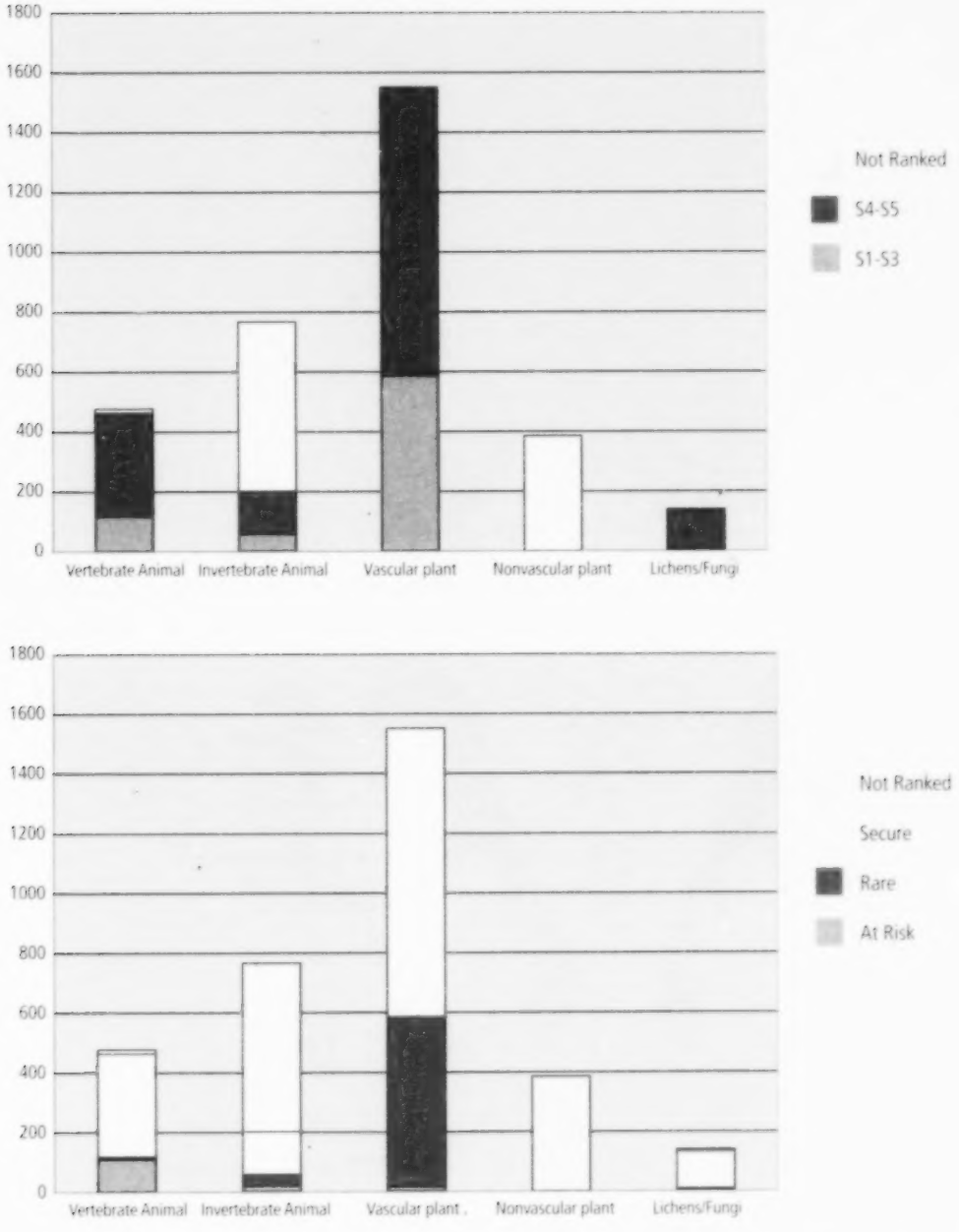
HIGHLIGHTS IN THE REPORTING PERIOD INCLUDE:

- Peer review and update of conservation status ranks for all vascular plant, vertebrate animal and selected invertebrate animal species, allowing the CDC to continue to focus on the species most in need of attention. Updated ranks were then converted to provincial general status ranks and used to develop national status ranks to meet provincial commitments to the national general status project.
- Development of a computerized data-collection system for vascular plant fieldwork using Geographic Information System (GIS)-equipped handheld computers. Staff are now able to load digital ortho-photos and other geographic data into handheld units and use built-in Global Positioning System (GPS) to view their actual locations on the photos in real time. They then collect data on locations where species were found. Global Positioning System (GPS) locations are then downloadable into the Biotics application.
- Incorporation of thousands of individual observations of animals – particularly grassland bird species – into Biotics, updating the database for these species and meeting network data standards.
- Updating of hundreds of element occurrences for rare and at-risk vascular plants, including incorporation of GPS data.
- Remapping of known locations of animal assemblages (snake dens, water bird colonies) was initiated, making use of updated standards used throughout the NatureServe network to better depict the locations and manage the information on species found there.

DEMONSTRATED BENEFITS OF THESE ADDITIONS AND IMPROVEMENTS INCLUDE:

- the ability to make more precise calculations of aerial extent of the species in Manitoba – a key criterion used in assessing status of candidate species at risk
- the ability to use precisely mapped locations as candidates for critical habitat designation under the federal *Species At Risk Act*
- the provision of information on known locations of species at risk to conservation partners, wishing to sign conservation agreements with landowners

Figure 2 - Number of Species in the Conservation Data Centre Database in Major Taxonomic Groups (Vertebrate and Invertebrate Animals, Vascular and Nonvascular Plants and Lichen and Fungi), Broken Down by Provincial Conservation Status.



Rare species are those ranked S1 (very rare) to S3 (uncommon) by the Conservation Data Centre (CDC). Secure species are those species ranked S4 (apparently secure) or S5 (demonstrably secure) by the CDC. At risk species are those species listed as Endangered or Threatened under *The Endangered Species Act* (Manitoba) and/or *The Species at Risk Act* (Canada).

Figure 3: Number of Observations of Provincially Ranked S1-S3 Species per Township in the Manitoba Conservation Data Centre Database

Figure 4: Number of Observations of Federally or Provincially Listed species per Township in the Manitoba Conservation Data Centre Database

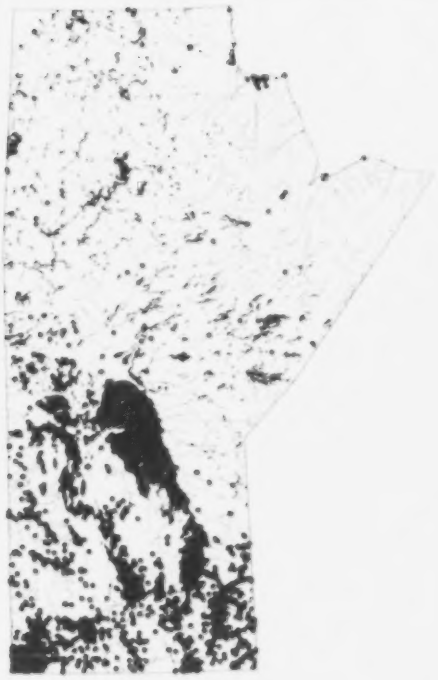
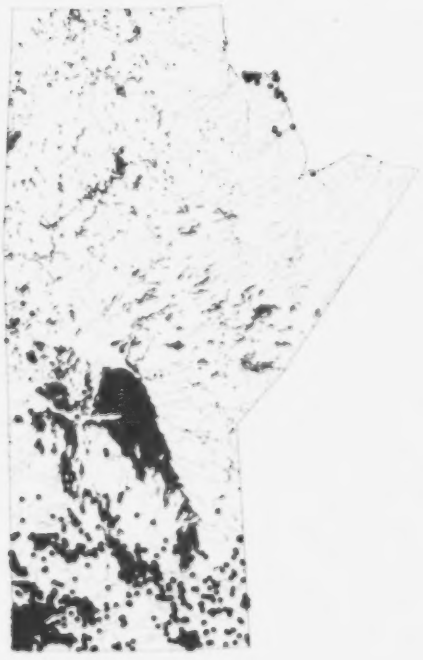


Figure 5: Changes in Conservation Data Centre Biotics Database (2002-2007)

● 2993 discrete species observations contained in Biotics database by March 31, 2002



● 5315 additional discrete species observations contained in Biotics database after March 31, 2002

626 existing observations were updated with new information

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Outreach Activities

Adventure Learning Program – Leadership Camp

The Adventure Learning Program – Leadership Camp is an educational program for high school students organized by Polar Bears International, a non-profit organization dedicated to conservation of polar bears through education. Since its inception in 2004, twelve to fifteen high school students from Canada, USA, Australia and Europe have travelled to Winnipeg and Churchill each year to learn about the impact of climate change on polar bears. The program also provides an opportunity for students to learn first hand about issues in polar bear management.

Wildlife and Ecosystem Protection Branch selects one student each year to participate in the camp. The branch makes presentations available to the students on a variety of topics by biologists, Natural Resource officers and resource managers in both Winnipeg and Churchill.

General Extension

During the reporting period, displays were staffed each year at various events, trade shows and meetings. These included:

- Royal Manitoba Winter Fair
- Rural Forum
- Delta Marsh Birding Festival
- Manitoba Grazing School
- Association of Rural Municipalities annual convention
- Manitoba Conservation Districts Association annual meeting
- Canadian Waterfowl Festival
- Home Expressions
- Dauphin Forage and Beef Days
- The Organic Producers Association meeting
- Manitoba Cattle Producers Association annual general meeting

Presentations were also given by staff to various interest groups and schools over the last five years. Some of the topics included:

- Manitoba's Conservation Data Centre
- Manitoba's great white bears
- Food webs and predator-prey relationships
- Conservation by design
- Endangered species
- Geese in Winnipeg
- Bovine Tuberculosis in wildlife
- Chronic wasting disease
- Parasites in wildlife
- Near-Urban Wildlife Strategy
- Polar Bear Alert Program

- Using biodiversity as a teaching tool
- Environmental impact assessment
- Prairie ecosystems

Staff continued to participate in the Manitoba Envirothon – an annual Olympic-style academic and environmental program for high school students (Grades 9-12). The students are tested in four discipline areas: aquatics, forestry, soils and wildlife, plus an annual theme discipline. Staff prepared test questions for the field day and oral competition components. Events have been held at various locations including Swan River, Brandon, Winnipeg and the International Peace Gardens.

In late July 2006, Winnipeg played host to the 2006 International Canon Envirothon. The University of Manitoba was the host site, with the field test being held at Birds Hill Provincial Park. Staff continued to participate by presenting workshops for the students and compiling and marking the field test questions for the event.

Project WILD

Project WILD is an environmental education program emphasizing wildlife. It is sponsored by the Canadian Wildlife Federation (CWF). This program has been delivered in Manitoba by the Wildlife and Ecosystem Protection Branch under the terms of a formal agreement with the CWF since 1986. The CWF has signed similar agreements with the wildlife branches of most provinces and territories to deliver this program. The Wildlife and Ecosystem Protection Branch provides activity guides, published by the CWF, to educators who complete a training workshop sponsored by the branch.

Project WILD workshops are usually led by a facilitator, who can assist others in integrating the materials into their classroom teaching, and a wildlife specialist who has a thorough knowledge of resource management in the province. In 1999, the Project WILD activities were identified in the Pan-Canadian Science document for use in specific outcomes for the Grade Four Science curriculum.

During the reporting period, 19 training sessions were held with approximately 380 educators trained in the use of Project WILD materials. Training sessions were held during the annual Special Area Groups (SAG) conference in-service day and as part of the education course at universities.

Project WILD workshop evaluations continually reflect positive comments regarding the high quality of the material and the manner in which it is presented.

National Wildlife Week

National Wildlife Week (NWW) is a yearly project co-ordinated by the Canadian Wildlife Federation (CWF). It was established to celebrate the accomplishments of naturalist Jack Miner and always held around April 10th, Miner's birthday.

The CWF produces wildlife education kits, which include information on the annual theme, an activity booklet and posters. The themes over the past five years included: Climate is Changing, Help Wildlife Weather the Storm: Native Species, Nature's Choice: Give Backyard Birds Something to Sing About: Explore and Embrace a Special Wild Place: and Watersheds...More Than Just Water.

These wildlife education kits were purchased by Manitoba Conservation and were distributed to all Manitoba schools, libraries, towns, villages, rural municipalities, conservation district and conservation offices in advance of NWW.

STATUS OF SPECIES IDENTIFIED IN THE WILDLIFE ACT

Big Game Animals

Barren-ground Caribou

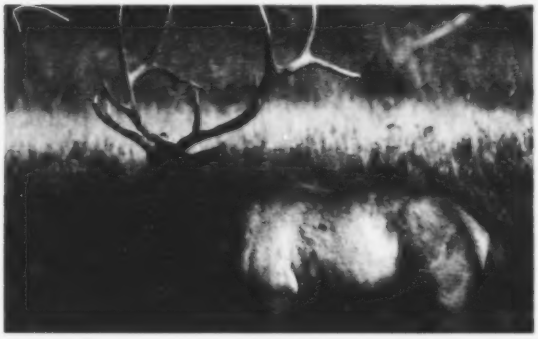
The fall caribou migration into Manitoba by Barren-ground caribou has remained strong for the past five years. Most animals are from the Qamanirjuaq herd, with few coming down from the northwest part of the province. Movements into the eastern part of the fall range usually commence the latter part of August and peak in September. For the past five years, high numbers of caribou were noted throughout the fall range and a very good migration continued into the wintering areas east of Lac Brochet. The winter range has remained similar from year to year, with the exception of 2005, when the herd reached south of South Indian Lake. The eastern extent of the range has been the Churchill River. Within this area, it is believed that mixing occurred with caribou from the Cape Churchill herd. The spring migration to the calving and post-calving areas starts in March and continues into May. Most of the caribou are located along the coast moving north at this time. Caribou are also seen near Tadoule Lake in the latter part of May and these are usually mature bulls.

Both resident and non-resident hunters hunt this herd. The licence allocation for residents remained at 400 licences with the opportunity for a second tag. For non-residents, there was an increase of 50 licences for a total of 440 non-resident licences for the fall hunt but no winter hunting season by non-residents. The success rate for both residents and non-residents is high. Residents and non-residents hunt from fly-in caribou camps on the fall range. Residents, during the winter season, usually hunted off the winter road to Tadoule Lake, with some hunting by residents at the north end of South Indian Lake. Most First Nation hunting came from the communities of South Indian Lake, Tadoule Lake, Brochet, Lac Brochet and Nelson House. Harvest numbers were down primarily due to a decrease in the number of hunters.

The Beverly and Qamanirjuaq Caribou Management Board remains active and has again made significant contributions to the management of both herds. The Board continues to promote the importance of both herds to the people in northern Manitoba. Replacement cost of meat harvested from these herds annually would exceed $19 million. A population survey has been completed for the Beverly herd including the deployment of radio-collars. The last aerial survey of the Qamanirjuaq herd was completed in 1994. In 2006, 20 radio-collars were deployed in anticipation of a total herd survey in 2008. There has been a notable decrease in caribou numbers throughout herds to the west. It is anticipated that this may have also occurred in both the Beverly and Qamanirjuaq herds. Therefore a survey has been proposed to enable setting of sustainable harvest numbers throughout the range.

Elk

The provincial elk population in 2007 was estimated at 6,400 animals, slightly below the 2002 estimate of 7,900 elk. The decrease is mainly attributed to the regulated reduction in the Riding Mountain elk herd, which occured as part of bovine tuberculosis (TB) management activities in the Riding Mountain area. A population target of 2,500 was established for this herd. A three-year running average of the Riding Mountain elk herd indicates the population is slightly below the target. Duck Mountain and Porcupine Mountain herds remain below optimum levels, because of increased hunting and the slow recovery after the elk capture programs in the late 1990s.



The estimated number of elk in each of the major herds in Manitoba in 2007 was Riding Mountain – 2,300; Duck Mountain – 1,500; Porcupine Mountain / Red Deer Lake – 400; South Interlake – 1,200; Spruce Woods – 600. Small satellite herds of 25 to 150 animals continue to exist in the Pine River, Ethelbert, the Kettle Hills area in the west, the Vita and Piney areas of the southeast, the Oak Lake, Plum Lake areas, the Tiger Hills and the Turtle Mountains in the southwest.

The demand for elk hunting opportunity far exceeds the number of licences available. To provide a fair allocation of elk licences to residents of Manitoba, licences are issued through the Big Game Draw to resident rifle and archery hunters and through the Landowner Draw to landowners who own a quarter-section of land or more in the Game Hunting Area (GHA) where an elk season is offered. Because resident hunter demand cannot be met on an annual basis, there are no elk hunting licences available for non-residents.

Moose

Moose populations have remained stable at approximately 30,000 animals. The demand for moose hunting opportunities exceeds supply in most road-accessible areas. In these areas, moose hunting licences are allocated through the Big Game Draw. In more remote areas east of Lake Winnipeg and in northern areas, moose hunting licences are available at licence vendors.

Annual sales of moose hunting licences have declined by 11 per cent since the last review, ranging between 4,700 and 5,160 compared to 5,400 and 5,675. It appears that winter moose hunting opportunities are not as popular with hunters as they once were, which might be associated with an aging clientele.

White-tailed Deer

The total provincial population of white-tailed deer did not change significantly during the five-year reporting period, with counter-balancing increases in the southeast and decreases in the southwest. The January population estimates remained between 150,000 and 180,000 in the reporting years. Deer numbers recovered in the southeast (GHAs 33 through 36) due to a series of mild winters. However, deer numbers in the southwest (GHAs 22, 27, 28, 29, 29A, 30, 31 and 31A) have been decreasing. Manitoba Conservation has responded to this concern by increasing the deer harvest in southeast Manitoba tenfold since 1997.

Deer numbers have increased in and around the City of Winnipeg and there is ongoing concern about deer-human conflicts. Manitoba Conservation encourages hunting to manage deer numbers in GHAs near Winnipeg. In 2003, Manitoba Conservation developed the Near-Urban Wildlife Strategy, initiated in part by safety concerns related to the use of centrefire firearms during the general deer season. Manitoba Conservation consulted with municipal governments around Winnipeg to develop and implement the Near-Urban Wildlife Strategy and Near-Urban Wildlife Zone. In 2005, a provincially regulated prohibition of centrefire rifles for big game hunting was introduced within the Near-Urban Wildlife Zone,

in all or portions of the Rural Municipalities of Headingley, Rosser, Rockwood, St. Andrews, West St. Paul, East St. Paul and St. Clements. Hunters are able to use other legal equipment types (shotgun, muzzleloader, archery, and crossbow) during the rifle deer season within the Near-Urban Wildlife Zone.

The number of hunters participating in the resident general firearm season during the five-year reporting period has decreased from 31,076 in 2002 to 29,608 in 2006. In the primitive weapons seasons, archery deer licences were stable at about 3,000 licences over the past five years, while muzzleloader licence sales increased to about 8,300 licence sales. Average success rates are 63-75 per cent for rifle hunters, 36-45 per cent for bowhunters, and 60-68 per cent for muzzle-loader hunters.

A second deer licence continues to be offered to resident hunters in selected GHAs in Deer Hunting Zones B, C, D, E and F. In 2003, a third deer licence was offered to resident hunters in GHA 33. Since 2006, the third deer licence has been expanded to include selected GHAs in Deer Zones E and F.

Black Bear

The black bear population is estimated to be at, or near, carrying capacity, with limited increases being recorded in the transition areas bordering the boreal shield to the north and the prairie plains to the south. Manitoba's bear management program focuses on balancing the number of bears the habitat can reasonably support, with the number of bears the public is willing to tolerate, in the most cost-effective manner. Preliminary findings of an internal review of management practices currently being applied across North America suggest a correlation between growth in both the population and the trend and level of problem bear incidences, and the harvest strategies being employed. The review supports Manitoba's current harvest strategies, which include the spring bear hunt and the use of bait to maintain populations at, or below, biological and social carrying capacities. The results of this review were published in 2007.

Although the black bear is a valued resource, both aesthetically and economically, some bears damage or threaten apiaries, campgrounds, crops, livestock and personal property. Occasionally, bears searching for food encounter people and can become a nuisance or a perceived threat merely by their presence in places when and where they are not expected or wanted. An effective bear management program was set up to address this issue by establishing a nuisance bear-management plan.

In 2002, a problem bear policy was developed which:

- established uniform province-wide guidelines for handling nuisance bear complaints
- implemented a system to monitor nuisance complaints
- created a public awareness plan to educate the public on dealing with nuisance bear problems

A committee, including representatives from Manitoba Conservation and Manitoba Agricultural Services Corporation (MASC), was also formed to review the compensation program for damage caused by black bears and other wildlife.

The annual sale of bear hunting licences has increased by nine per cent, ranging between 3,200 and 3,400. In the early 1990s, resident hunters

accounted for 60 to 65 per cent of licence sales. Now, they account for about 40 per cent. To achieve population-management targets, non-resident hunting opportunities have been increased in response to the decline in resident licence sales. Non-resident hunting allocations are reviewed every three years and hunters are directed to human-bear conflict areas in the province.

The annual black bear harvest has remained stable, ranging between 1,900 and 2,000 animals harvested; as have hunter success rates – resident hunters at 25 per cent and non-resident hunters at 75 per cent. Overall, hunters harvest six to eight per cent of the estimated 27,000 – 32,000 bears.

Gray Wolf

Manitoba's gray wolf population is estimated at 4,000 animals. It remains generally stable with the exception of the increasing Riding Mountain region population. Wolves inhabit most of Manitoba's forested areas and tundra in varying densities. They are present in islands of wooded habitat in southern Manitoba such as the Riding Mountain and Duck Mountain areas. Wolves also venture into the Aspen parkland between the northern forests and agricultural lands to the south.

The Riding Mountain population has recovered in recent years from declines in the late 1990s. Manitoba Conservation maintained a closure of wolf hunting and trapping around the Park.

Fur Bearing Animals

Furbearer population trends are determined by analyses of fur dealer reports, public reports (usually in the form of complaints), and observations by field staff. No scientific surveys are conducted for the province as a whole, as occurs with some big game species. Black bear and wolf are described in the Big Game section of this report.

Badger

Badgers have again shown a marked increase from the previous reporting period. Harvest efforts are a mere fraction of what they were before 1980, when pelt prices began to decline significantly. The species is not commonly targeted by trappers, and is typically taken by chance only when encountered. The population is at a sustainable level at the current habitat and harvest rates. With fur prices now climbing to 1980 levels, harvest will need to be monitored more closely to ensure population sustainability.

Beaver

Beaver populations are very high throughout most of its range, particularly in western areas of the province. Trapping pressure has again decreased significantly in response to lower market value for beaver pelts and greatly increased trapper costs. Populations are sustainable at the current habitat and harvest levels. Riding Mountain populations appear to have decreased in the last decade. Neighbouring boreal populations will be monitored to determine if similar changes have occurred.

Bobcat

Bobcats are uncommon in southern Manitoba and harvests are very low. Populations increased significantly since the first year of reporting in 2001, but appear to have returned to regular levels in 2005/06. Similar increases were seen in neighbouring North Dakota and Minnesota. Specimens were taken as far north in Manitoba as the Eriksdale and Pine Falls areas. The species is taken incidentally in Manitoba and populations are believed to be sustainable.

Coyote

Coyote populations increased through this reporting period, following decreases the previous reporting period due to sarcoptic mange. Combined with a pelt price increase, the harvest increased to levels approaching the mid-1980s. Populations are sustainable and have reached the nuisance level in many areas of agro-Manitoba.

Fisher

Fisher populations are generally stable in the long term but considerable annual variation occurs. Some range extension was seen into the Pembina Valley and the southwest corner of the province during the reporting period. The harvest rates declined in the middle of the reporting period, and rose towards the end. Trends in harvest rates over the last two decades are remarkably similar, towards a five- to seven-year cycle, although research elsewhere suggests a ten-year cycle. The species population is sustainable at present harvest and habitat levels.

Arctic Fox

The Arctic fox population deviated from its normal three to four-year cycle, with a four-year depression that ended when numbers increased in 2003/2004. The species abundance closely follows that of its primary prey species, the lemming. As its cycle continues, the species will be closely monitored to ensure sustainable populations.

Red Fox

The red fox population generally increased during the reporting period, which was most apparent in agro-Manitoba, where sarcoptic mange was a significant mortality factor. The species population is sustainable at present, although may be inhibited by the significant increase in coyote populations.

Lynx

The lynx population reached its cyclical peak at the beginning of the reporting period, in step with its 10-year cycle. The cycle reached its trough in northern Manitoba at the end of the reporting period. Trapper effort was low overall in 2005/06 and 2006/07 because of warm weather. The season was not shut down during the low period portion of the harvest cycle.

Marten

The marten has now reoccupied its former ranges throughout Manitoba as forests matured. Population and harvest cycles of three to four years are now expected to be seen, concurrent with changes in prey numbers. Harvests again approached record levels, with over 27,000 in 2004/05. The species is harvested well below its maximum sustainable limit, but commercial demand and trapping pressure necessitates continuous monitoring.

Mink

Harvest data indicates this species may follow a cycle like some other furbearers, associated with muskrat, a key prey species. The cycle may have approached its trough towards the end of the reporting period. The mink population is considered sustainable, but prolonged dry periods may further affect habitat in some areas in southern Manitoba.

Muskrat

Muskrat populations increased from the last reporting period, especially with higher water levels in the Western Region and the Northern Special Trapping Area in 2005/06. Harvests also increased in response to temporary higher pelt prices in early 2006. The population is sustainable at present, but drought affects habitats locally in southern Manitoba.

Otter

The otter population was generally stable during the reporting period, with modest increases in the boreal habitats of Manitoba. A shut down of the Chinese fur market in early 2006 was expected to be reflected in fur prices, reducing trapper effort/

harvest for this species. The population is considered sustainable.

Raccoon

Raccoons continued to increase during this reporting period, especially in urban areas where it is a nuisance species. This species has expanded its range into areas where few raccoons had been reported previously, mostly north-central Manitoba. This population increase is expected to continue into the next reporting period, and ensure sustainable populations.

Red Squirrel

The red squirrel population is thought to be at a sustainable level. The harvest was down from the previous reporting year due to lower prices/less trapper effort. Warmer winters during the reporting period likely enhanced squirrel survival.

Prairie Long-tailed Weasel

The range of the prairie long-tailed weasel includes most of southern Manitoba, excluding the Interlake. Populations are believed to be sustainable, and monitoring will be done over the next reporting period to assess if any range expansion has occurred.

Short-tailed Weasel

Short-tailed weasel populations are sustainable, but subject to local fluctuations depending on numbers of its prey species, like rodents. Despite higher pelt prices for this species, harvest efforts generally decreased as trappers focused on more lucrative species such as marten.

Wolverine

Wolverines are rare in Manitoba, but the population is stable. The north-central and north-east sub-regions of the province are considered reservoirs for the species, as very little trapping of the wolverine occurs there. Individuals were taken in the Pine Falls and Bissett areas of eastern Manitoba, representing a significant southward re-occupation of its former range. The provincial population is sustainable at present, but will be closely monitored as human development encroaches the north.

Upland Game Birds

Manitoba is home to a variety of upland game birds. Three species of grouse (ruffed, sharp-tailed and spruce) and two species of ptarmigan (willow and rock) are native to Manitoba. Three introduced species, gray partridge, ring-necked pheasants and wild turkey are also recognized as game birds.

Hunting of upland game birds has always been an important tradition in rural Manitoba. Upland game bird populations are cyclic and fluctuate between great abundance in some years to scarcity in others. Historically, licence sales to Manitoba hunters have reflected the status of the population where higher numbers of hunters participate during years of high grouse numbers and conversely, fewer hunters go afield when grouse populations are low.

Similar to other parts of Canada, hunter numbers in Manitoba have been following a decreasing trend since the late 1970s. Interest in upland game bird hunting has decreased accordingly, primarily due to an aging population, urbanization and changing interests. Despite the reduced interest in hunting, many residents continue to take advantage of Manitoba's abundant upland resource. Wildlife Management Areas are a favourite spot for fall walks where upland birds are generally abundant. Additionally, sales of wild turkey hunting licences have soared over the past five years. Healthy populations of wild turkeys coupled with mentored hunting programs for youth and reduced costs of licences have provided new and exciting hunting opportunities at a time of the year when other hunting seasons are limited. Interest and participation in hunting of wild turkeys is expected to continue its positive growth pattern.

Grouse

Accurate population estimates are not available on a provincial basis, but trends in population status are determined annually in southern management zones through periodic spring counts. Populations of ruffed grouse and sharp-tailed grouse increased since the early 2000s and are expected to peak in 2007. Spruce grouse are widely distributed in Manitoba's coniferous forests, with much of their range inaccessible. Locally, numbers of spruce grouse are influenced by forest harvesting operations, fire and predation. Overall, spruce grouse are not threatened by human activity at this time.

Ptarmigan

Both species of ptarmigan are found in the northern portion of the province. Willow ptarmigan are year-round residents in Manitoba. Rock ptarmigan tend to immigrate into the province during the winter. Hunting pressure is limited and generally localized near communities but ptarmigan hunting remains an important activity for securing food for many northern residents.

Gray Partridge

This introduced species has a limited distribution, primarily associated with agricultural areas in the southwest portion of the province. Population status is influenced by available habitat including wind breaks and shelter belts in agricultural areas. Hunting pressure is light and harvest is usually associated with hunters pursuing other species.

Wild Turkey

Efforts by non-government wildlife organizations to establish wild turkeys in Manitoba have been highly successful. Over the past 40 years, the wild turkey population has continued to expand its size and range in southern Manitoba. Wild Gobblers Unlimited, a volunteer organization is the primary group responsible for success of this management initiative. The current population is estimated to be between 5,000 and 7,000 birds.

The success of the wild turkey introduction program has resulted in some unforeseen problems. Turkeys have moved into some urban areas, taking up residence in residential neighbourhoods. In some cases, trapping and removal of turkeys has been necessary. Captured birds are released in suitable habitat away from urban centres.

Ring-necked Pheasants

Ring-necked pheasants are considered wildlife under the Act, but no viable populations of these species currently exist in the province. Ring-necked pheasants were released in large numbers in southern Manitoba during the 1950s and earlier, but severe climate, lack of suitable cover and the bird's inability to forage in the winter reduced

survival of released birds and limited their ability to become established in the province. Releases have not been undertaken since the early 1990s due to the inability of the birds to adapt to Manitoba's climate.

Migratory Game Birds

With current high populations of geese and healthy numbers of ducks, an estimated six to ten million waterfowl migrate south through Manitoba during the fall period. Many of these birds spend a considerable amount of time on southern Manitoba staging areas, foraging on waste agricultural grains. This migratory activity provides significant opportunity for hunters, photographers and people wishing to view and enjoy wildlife.

Management of North American waterfowl populations is governed by the tri-national Migratory Birds Convention, and is co-ordinated through a flyway system. Manitoba is an active member of the Mississippi Flyway Council and Technical Section, and co-operates on flyway management programs. Council members include Canadian and American federal representatives, state and provincial waterfowl managers and private organizations.

Sales of migratory game bird permits in Manitoba have gone from a peak of more than 50,000 in 1978 to less than 14,000 in 2005. However, provision of new hunting opportunities along with mentoring partnerships resulted in a slight increase in migratory game bird licence sales in 2006. Aging population, urbanization, economics and federal gun registration have all had a negative influence on participation in hunting across Canada.

In 2000, Manitoba introduced Waterfowler Heritage Days, a mentoring program designed to introduce youth to the concepts of ethical use and stewardship of waterfowl and other natural resources. The program encourages youth and adults to experience the outdoors together and to contribute to the long-term conservation and management of migratory birds. Response to the program has been tremendous with several non-government organizations coming to the forefront by developing and delivering quality experiences for young hunters. The program has continued to expand each year with several hundred new hunters having the chance to experience Manitoba's superb hunting and outdoor opportunities.

Ducks

Ducks nest and stage throughout Manitoba. However, the greatest diversity and the highest breeding densities occur in the southern agricultural regions. Duck numbers fluctuate on a regular basis, as a result of wet and dry cycles on the prairies. The fall flight of ducks from Manitoba varies accordingly, becoming extremely low during prolonged periods of drought and rebounding when wetter conditions prevail. Current trends in populations of ducks in Manitoba have been positive with most species at, or exceeding, ten-year averages. Information gathered on breeding duck populations in Manitoba is combined with data from other breeding areas in North America and is used by member organizations in the Mississippi Flyway to access the status of North American duck populations and to determine annual harvest strategies for all jurisdictions within the flyway.

The harvest of ducks in Manitoba has decreased significantly since the 1970s. Fewer hunters and a decrease in interest in duck hunting by resident hunters are the primary reasons for the reduction.

Geese

Most goose populations in North America continue to experience rapid growth and geographic expansion. Concerns regarding an over-population of lesser snow geese lead to the implementation of special conservation seasons for snow geese throughout most of North America. Manitoba introduced a special conservation season in 1999 to encourage hunters to take additional snow geese. A spring season for snow geese-only opened in the northern portion of the province. The opening date for the fall snow goose season in this area was moved to mid-August. The spring season was expanded in 2000 to all portions of the province. Hunter participation in the special conservation season has been low and populations of lesser snow geese have remained relatively high. However, northern resident hunters have been particularly pleased with the opportunity to harvest geese in the spring when the birds are in better body condition than during the traditional fall hunting period.

Many Canada goose populations, particularly large (giant) Canada geese, have also shown a positive growth trend over the last couple of decades. Large Canada geese have expanded their distribution throughout the southern half of the province and can now be found in almost every farm dugout and pond. Urban centres such as Winnipeg have seen phenomenal growth in nesting geese as well as fall staging geese. Fall staging counts, within the perimeter highway surrounding Winnipeg, have shown a strong tradition for birds to move into this area, with peak numbers of now exceeding 170,000. Due to concerns about human health and safety, Manitoba Conservation has initiated hunting seasons in two municipalities that extend inside the perimeter highway boundary surrounding Winnipeg. This new hunting opportunity has been reserved for resident hunters only with Manitoba Conservation offering a mentored youth hunt to interested Manitoba youth.

Manitoba is fortunate to have some of the best goose-hunting and viewing opportunities in North America. The number of non-resident hunters coming to Manitoba has increased over the past decade and the trend is expected to continue through the next five-to-ten years. Non-resident hunting provides a significant economic benefit to Manitoba, particularly for small centres outside of Winnipeg. On average, more than 5,000 non-residents of Canada hunters come to the province each fall to experience the world-class waterfowl and upland hunting opportunities.

Manitoba will continue to provide world-class opportunities for both consumptive and non-consumptive uses of migratory birds into the future. Economic opportunities based on game bird ecotourism and hunting will continue to expand because of Manitoba's commitment to wildlife management and protection of habitat. Both ducks and geese have benefited greatly in Manitoba from the North American Waterfowl Management Plan (NAWMP) (see page 32), the single largest conservation program in Canada and the United States.

Amphibians and Reptiles

Red-sided Garter Snake

The Narcisse Snake Dens, or hibernacula, are renowned internationally as a unique natural phenomenon, representing the world's largest concentration of the Red-sided Garter Snake *(Thamnophis sirtalis parietalis)*. They remain popular with Manitobans and non-residents who visit each spring to watch the snakes emerge. The abundance of snakes at Narcisse and elsewhere in the Interlake continues to attract scientists from Canada and the USA to study the ecology and physiology of the species.

The Narcisse Snake Management Advisory Group, consisting of representatives of provincial and local government, advocacy groups and the scientific community, meets twice a year to discuss management issues and plan for the increasing number of visitors who visit the site each year. Originally formed to address concerns over snake mortality on Provincial Trunk Highway #17, the group, in partnership with Manitoba Hydro, Centra Gas and a number of other businesses and organizations, installed 13 small diameter tunnels under the highway and

over two kilometres of snake barrier fencing to guide the snakes into the tunnels. Since the system has been in place, road kill has been reduced by 75 per cent.

Studies of the population dynamics and habitat use of Red-sided Garter Snakes in northern Manitoba by researchers from the University of Manitoba has led to the discovery of previously unknown hibernacula in the Jenpeg area. These populations are the northern-most for the species in the province.

Protected Species

Cougar

Cougar remain elusive in Manitoba and populations likely remain low. On average, 20 to 25 sightings a year are reported and mapped to monitor changes in range or relative abundance by region. Most sightings fail to yield conclusive evidence of a cougar's presence but fresh tracks in snow or soft ground are occasionally reported and investigated.

In the last two months of 2004, two dead cougars were turned into Manitoba Conservation from Western Region and in 2006, also in Western Region, a cougar was photographed by a local land owner. These incidents generated a great deal of interest in cougars by the public that has been maintained to the present. In response to this interest, Wildlife and Ecosystem Protection Branch held information sessions for the public in Swan River, Neepawa, Peguis, Riding Mountain National Park, and St. Malo Provincial Park; and for regional staff in Interlake Region. The sessions conveyed information on the biology and ecology of the species and advised people what to do if they encounter a cougar.

Wood Bison

This unique subspecies of bison was designated as protected in Manitoba by regulation in 1994. From 22 animals released in two groups in 1991 and 1996 near Chitek Lake in the northern Interlake region, the re-introduced herd has grown to an estimated 250 to 275 animals by February 2007. Manitoba Conservation is continuing to work co-operatively with Skownan First Nation to address management issues as they arise. This work was supported in 2003 and 2004 by matched funding from the Habitat Stewardship Program.

Polar Bear

The Western Hudson Bay population of polar bears, shared between Manitoba and Nunavut, declined 22 per cent from approximately 1,200 bears to just 935 bears between 1987 and 2004. These declines have been linked to reduced body condition, and reduced survival of cubs and sub-adult bears by Canadian Wildlife Service scientists.

Between 1971 and 2003, the mean annual temperature increased at Churchill by 0.5°C per decade and spring break-up of the ice on the bay is now occurring three weeks earlier than it did in the 1970s.

Hudson Bay's bears live on the ice hunting seals through the winter and into the summer. When the ice melts, they move ashore and survive on stored fat until the following winter when they can hunt seals on the ice once again. Most bears fast for about four months, however, pregnant females remain on land to give birth and fast for about eight months.

Early ice break-up cuts short the bear's time to hunt and build up their body condition, and longer ice-free periods extend the time that the bears fast on shore. For each week early that break-up occurs, the bears are about ten kilograms (kg) lighter than they would have been with the extra time to forage. The average weight of lone (and suspected pregnant) adult female polar bears has declined from 290 kg in 1980 to about 230 kg in 2004.

Warmer weather for Hudson Bay can have other catastrophic impacts on polar bears. Spring rains have been known to collapse maternity dens before mother and cub have departed and can impact the maternity dens of ringed seals, the primary prey species for Manitoba's polar bears. Warmer weather can also lead to an increase in the number of forest and brush fires in areas where polar bears dig maternity dens in peat. Fires melt the permafrost and without roots and other plant debris to hold the roofs together, dens often collapse. It can take 70 years after a fire for enough trees and shrubs to grow back to allow the denning sites to be used again.

Churchill continues to be the premiere site for viewing polar bears in the wild and thousands of visitors from around the world travel to Churchill each October and November to view the bears. The annual Polar Bear Alert Program for the Churchill town site and surrounding area manages human / polar bear interactions to (1) ensure the safety of people and the protection of property from damage by polar bears and (2) ensure that bears are not unnecessarily harassed or killed. It has reduced the number of annual defense kills from an average of 11 per year in the 1970s to less than two per year today.

The protection of Manitoba polar bears and their habitat has been enhanced during the reporting period through the licensing and regulation of ecotourism operators under *The Resource Tourism Operators* Act to prevent illegal or substandard facilities and operations; and by regulating the procurement, holding and export of live polar bears under *The Polar Bear Protection Act*.

NORTHERN PRAIRIE SKINK

Manitoba's only lizard is found in the sand hills of Spruce Woods Provincial Park, the Shilo military range and adjacent private lands near Carberry. Although populations are difficult to monitor, it is believed that skinks are less numerous today than prior to settlement. A continuing loss of habitat due to expanding leafy spurge and aspen are considered major threats. Research into population genetics, habitat use and home range characteristics began in 2001 with the support of Wildlife and Ecosystem Protection Branch as well as a small contribution from the Habitat Stewardship Program.

Status of Species Identified in The Endangered Species Act

The Wildlife and Ecosystem Protection Branch is responsible for administration of *The Endangered Species Act*, enacted in 1990 to:

- ensure the protection and conservation of endangered and threatened species in the province
- enable the reintroduction of extirpated species into the province
- designate species as endangered, threatened, extinct or extirpated

The Endangered Species Act prohibits human activities that would kill, disturb or interfere with any species listed in the Act. The Act also prohibits human activities that damage, destroy or remove habitats and natural resources, which protected species are dependent on for life and propagation. Possession of species listed by regulation under the Act is prohibited. The Conservation Minister may grant permits providing exceptions to these rules to allow for scientific research or reintroduction efforts involving listed species.

The Endangered Species Advisory Committee (ESAC) was created by the Act to advise the Conservation Minister on matters relating to species at risk in Manitoba. The committee is comprised of Manitoba scientists and citizens with an interest or expertise in biodiversity conservation. The committee makes recommendations for designation based on status reports prepared primarily by the Biodiversity Conservation Section of the Wildlife and Ecosystem Protection Branch in consultation with local species experts.

As of March 31, 2007, a total of 28 species have been designated by regulation as Endangered, Threatened, or Extirpated under the Act.

During the reporting period, Wildlife and Ecosystem Protection Branch continued work on a series of fact sheets on Manitoba's Species at Risk, targeting an audience of landowners, school children and interested Manitobans. A total of 15 fact sheets have been completed to date. A set of species at risk bookmarks was also developed, featuring drawings of a number of species at risk and links to the branch's website.

Improved knowledge about species at risk in Manitoba is critical for sound decision-making and stewardship. The Wildlife and Ecosystem Protection Branch collects and collates information on all listed species through directed surveys as well as, on an incidental basis to aid in assessing species' status and to determine what can be done to reverse declining trends. A summary of monitoring and stewardship activities undertaken for listed species during the reporting period follows.

ENDANGERED SPECIES:

Birds

Baird's Sparrow
(Ammodramus bairdii)

Formerly common throughout southern Manitoba as far east as Winnipeg and north to Swan River, the Baird's Sparrow is now restricted to the extreme south-western corner of Manitoba. Like a number of species common to prairie grasslands, continued loss and degradation of native prairie or other suitable grassland areas have adversely affected Baird's Sparrows. Numbers of Baird's Sparrows encountered in grasslands of southern Manitoba dropped from a total of 15 to five sites during the early years of the 2002 to 2007 reporting period, but recovered to 16 sites by 2007. These numbers pale in comparison to the numbers of Baird's Sparrows observed in the late 1980s and early 1990s. In 1989, for example, Baird's Sparrows were recorded at a total of 265 sites in southern Manitoba during Grassland Birds monitoring efforts.

Burrowing Owl
(Athene cunicularia)

The status of the Burrowing Owl is precarious throughout much of prairie Canada and the Northern Great Plains. In Manitoba, the species was once common throughout south-western and south-central Manitoba, but populations have undergone a steep and continuous decline since the 1930's, seriously affected by:

- loss and degradation of critical nesting habitat
- reduced nesting success due to inclement weather and increasing predation rates
- excessive mortality of young and adults during the nesting season, during migration and on the wintering range

These factors contributed to continuing Burrowing Owl declines in Manitoba from an estimated 110 pairs in the late 1970s to no known pairs left in Manitoba by 2000. Although its status has not improved in the Canadian prairies since then, a noticeable increase in reports occurred in southern Manitoba in 2005, followed by nine nesting pairs being observed or reported in 2006 and four more in 2007. Nevertheless, unusually high predation rates on nests and young were observed during these years, so maintenance of a small nesting population in south-western Manitoba will continue to be a challenge.

Eskimo Curlew
(Numenius borealis)

Believed to number in the millions in the early years of settlement in North America, Eskimo Curlew declined rapidly during the 1800s due in large part to market hunters. Historically it may have nested along the Hudson Bay coast in northern Manitoba. It was reported as common at Fort Prince of Wales in 1879 and small numbers were reported near Churchill in the 1930s. Although the Eskimo Curlew is no longer believed to nest in Manitoba, it has been designated as an endangered species in Manitoba's Act based on the possible continued existence of a small number of migrants passing through the province on the way to their arctic nesting grounds.

Loggerhead Shrike
(Lanius ludovicianus)

Loggerhead Shrike populations continue to decline in Manitoba and throughout much of their nesting range in North America. While cool, wet periods since 1993 have severely hampered nesting success and contributed to recent declines, a combination of limiting factors are ultimately blamed for the species' decline, including habitat degradation and loss, predation and pesticide poisoning. In Manitoba, nesting populations are now primarily concentrated in extreme southwest Manitoba, with occasional nesting records south to Riding Mountain National Park, and east to the southern Interlake and Winnipeg. Nesting populations declined from over 300 pairs in Manitoba during the early 1990s to less than 100 pairs in recent years. During the last 5 years (2002-2007), nesting populations in southern Manitoba increased from 59 to 81 pairs by 2004 but dropped back to 54 pairs by 2007. During this same period,

however, the number of known shrikes near Winnipeg declined from eight to five nesting pairs.

Peregrine Falcon
(Falco peregrinus)

Peregrine Falcon populations across North America declined precipitously from the 1950s until the 1970s due to low productivity and eggshell thinning brought on by the effects of persistent organochlorines. These eliminated many southern nesting populations and severely reduced breeding populations in the north. DDT and some other persistent chemicals were banned in Canada and the USA in the 1970s, contributing to a partial recovery among many peregrine populations. Recovery has also been aided by reintroductions in many parts of its range. In Manitoba, releases were conducted in Winnipeg, Brandon, Gimli and Portage la Prairie from 1981 until 1994. Largely due to returns of released birds from here and elsewhere, one to three pairs have nested in Winnipeg each year since 1989 and one pair has nested in Brandon during most years since 1993. During the current reporting period (2002-2007), one or two pairs nested in Winnipeg during most years – a pair nesting on the Radisson Hotel successfully raised young during most of these years. Likewise, one or two pairs were observed in Brandon annually with successful nesting occurring on the McKenzie Seeds building during most years.

Piping Plover
(Charadrius melodus)

Monitoring and management activities for Piping Plovers in Manitoba are conducted on an annual basis as part of the Piping Plover Stewardship Program. Monitoring and recovery activities performed by the stewardship program in recent years include:

- continued monitoring on the status and distribution of nesting plovers throughout southern Manitoba, including an extended survey to assess other potential nesting areas in 2005
- protective fencing, enclosures and signage were installed during the nesting period at sites where potential for human-plover conflicts are high
- a volunteer guardian program was established at Grand Beach and in other areas where potential for human-plover conflicts are high to enhance protection of plover nests and young
- predator exclosures were installed at all known nests in recent years to enhance nesting success
- sensitive sections of beaches at Grand Beach were fenced off from recreational activities during the brood-rearing period to enhance productivity
- the involvement of Manitoba Parks staff, local communities, and other interest groups in an expanded public-awareness program on the status of Piping Plovers in Manitoba
- habitat-rehabilitation programs were initiated at several sites on Lake Manitoba and Lake Winnipeg where vegetation encroachment has resulted in nesting habitat deterioration

Whooping Crane
(Grus americana)

Whooping Cranes were never a common species and their maximum population in North America probably never exceeded 1,500. Once an uncommon nesting species in large lakes and marshes of south-western and south-central Manitoba, it was decimated here and in much of its range by habitat destruction and encroachment of civilization on most of its breeding range. By 1941, only 16 were known to occur throughout all of North America and some young were taken into captivity to replenish the population. By 2000, releases and protective measures had built up the population to over 350 birds, including 185 in the main Wood Buffalo nesting area, over 100 birds in captivity, and small numbers in several release areas. Some of the Wood Buffalo flock occasionally passes through southern Manitoba on their way to or from their winter home in Aransas, Texas.

Butterflies

Uncas Skipper
(Hesperia uncas)

The Uncas Skipper is a butterfly of dry sandy prairie and Manitoba records exist for the Brandon/Carberry area. Surveys of Lepidoptera in the area have failed to find any specimens of the Uncas Skipper in recent years.

Plants

Small White Lady's-slipper
(Cypripedium candidum)

Surveys of all Small White Lady's-slipper sites took place between 2002 and 2007. In spite of intensive searches for new sites over that time, only one new site was found. The number of plants observed fluctuated greatly from year to year, as they are susceptible to late spring frosts, but overall the population appears to be relatively stable. Hybridization between Small White Lady's-slippers and Yellow Lady's-slippers continues to be a concern – hybrid lady's-slippers have been observed at every site where Small White Lady's-slippers have been found.

Western Prairie Fringed-orchid
(Platanthera praeclara)

Monitoring of Western Prairie Fringed-orchid occurred annually at the Tall Grass Prairie Preserve (TGPP) between 2002 and 2007. The number of flowering plants observed yearly varied from a low of 4,798 to a high of 23,530. Dramatic year-to-year fluctuations are typical for the species, and on the whole, the population appears to be stable.

Great Plains Ladies'-tresses
(Spiranthes magnicamporum)

Great Plains Ladies'-tresses are found in Rural Municipalities of Stuartburn and Franklin, in fields and road allowances. Sites at the Tall Grass Prairie Preserve (TGPP) have been monitored by preserve staff; Conservation Data Centre (CDC) staff visited other sites frequently between 2002 and 2007. The population appears to be stable.

THREATENED SPECIES:

Amphibians

Great Plains Toad
(Bufo cognatus)

Great Plains Toads are generally found in dry open grasslands and occur in southwest Manitoba near Lyleton. Threats to the species include loss of habitat due to drainage of temporary pools preferred for breeding. Stewardship and recovery actions in Manitoba have focussed primarily on gathering information regarding distribution. Little is known regarding population size but continued use of flooded agricultural fields for breeding suggests that populations are stable.

Birds

Ferruginous Hawk
(Buteo regalis)

In Manitoba, nesting populations of Ferruginous Hawk disappeared in the 1920s and the species was absent from the province for nearly 60 years. After a single nest was found in the extreme south-west in 1982, nesting numbers built up to a high of 56 pairs in 1990. Its Canadian status improved from Threatened to Vulnerable in the early 1990s. A widespread crash in populations of its main prey (Richardson's ground squirrel) during the 1990s resulted in noticeable declines in nesting numbers. The number of nesting pairs remained stable at 36 pairs early during this reporting period. Numbers increased to 44 pairs by 2005 and have since returned to 36 pairs. Reduced food supplies continue to limit reproductive success and overall nesting numbers in Manitoba. Provision and use of nesting structures (wire baskets filled with sticks) in large, isolated trees in south-west Manitoba since the late 1980s has helped maintain Ferruginous Hawk populations by providing pairs with sturdier, more secure nests. From 2002-2007, 61-83 per cent of

Manitoba's Ferruginous population nested in artificial nests.

Butterflies

Dakota Skipper
(Hesperia dacotae)

The Dakota Skipper depends on native tall-grass prairie and exists only in a few isolated populations in southern Manitoba. Although formerly found in the Tall Grass Prairie Preserve (TGPP) near Tolstoi, it is now believed to be extirpated from the area. New populations have been discovered in the Interlake and in the Brandon/Carberry area.

Ottoe Skipper
(Hesperia ottoe)

Manitoba is the only province in Canada in which the Ottoe Skipper occurs. It prefers native mixed and tall-grass prairie and adjacent woodland clearings and has been found only near Aweme, Treesbank and Spruce Woods Provincial Park. Additional survey effort is being planned to determine the presence, and estimate population sizes and trends, and area of occupancy of Ottoe Skippers in Manitoba, as part of the recovery strategy.

Mammals

Boreal Woodland Caribou
(Rangifer tarandus Caribou)

Manitoba Conservation has continued to support research to determine movement patterns, home range, population sizes on various ranges and mortality factors. All of this is to assist in identifying critical habitat and securing the future of this species in Manitoba. Currently, Manitoba recognizes 10 distinct ranges based on geography or radio-telemetry investigations. The species is found in other areas but there are no data to identify specific ranges.

The estimated population is 1,821 – 3,135 animals. This does not include coastal animals, namely the Pen Island (approximately 10,000 animals) and the Cape Churchill (approximately 5,000 animals) herds. Populations of caribou in boreal areas are difficult to count. Limited licensed and First Nations hunting for caribou is permitted for the Cape Churchill and Pen Island herds but licences are controlled.

In April 2006, Manitoba Conservation released *Manitoba's Conservation and Recovery Strategy for Boreal Woodland Caribou*. This document is based on scientific research, knowledge and experience gained from co-operative partnerships with industry, First Nations and NGOs over the last three decades. The strategy is based on five guiding principles:

- ecosystem management
- the precautionary principle
- adaptive management
- sustainability
- a commitment to caribou maintenance

The goal of the strategy is to achieve self-sustaining boreal woodland caribou populations on all existing ranges in Manitoba and management of caribou habitat on all ranges to support and sustain populations inhabiting those ranges.

Release of the strategy was followed in June 2006 with an announcement that boreal woodland caribou were officially listed as a Threatened species under *The Manitoba Endangered Species Act*.

Manitoba Conservation continues to monitor herds with the use of radio telemetry in Nopiming Provincial Park, east of Lake Winnipeg and in the Kississing/Naosap area in northwest Manitoba. These studies are supported by the local caribou management board, which includes Manitoba Conservation, the Manitoba Model Forest, Manitoba Hydro, First Nations, Environment Canada (Habitat Stewardship Program) the Sustainable Development Innovation Fund, Tembec, Tolko Inc. Parks Canada Agency, University of Manitoba and the University of Toronto.

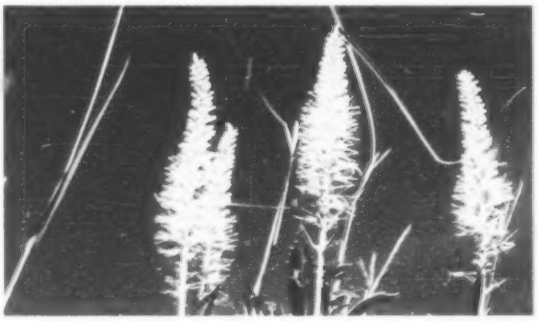
Mule Deer
(Odocoileus hemionus)

Mule Deer sighting were regularly reported by Manitoba Conservation staff, hunters and others in several locations. Most sighting occurred in the south-western part of the province, but several reports came from the Interlake, Duck Mountain and Riding Mountain areas. Formal aerial surveys are not conducted, but numbers remain low. Mule deer also remain a protected species with no hunting seasons.

Plants

Culver's-root
(Veronicastrum virginicum)

Culver's-root is found in the Rural Municipalities (RMs) of Stuartburn and Franklin, in fields and road allowances. Sites at the Tall Grass Prairie Preserve (TGPP) have been monitored by preserve staff; Conservation Data Centre (CDC) staff visited other sites frequently between 2002 and 2007. The population appears to be stable.



Riddell's Goldenrod
(Solidago riddellii)

Riddell's Goldenrod is found in RMs of Stuartburn, Franklin, Hanover and Ste. Anne in fields and road allowances. Sites at the Tall Grass Prairie Preserve (TGPP) have been monitored by preserve staff; Conservation Data Centre (CDC) staff visited other sites frequently between 2002 and 2007. The population appears to be stable.

Western Silvery Aster
(Symphyotrichum sericeum)

Western Silvery Aster grows in dry prairie sites that occur on beach ridges, gravel eskers and small surficial gravel deposits surrounded by finer soils. The species occurs in four general areas – the Birds Hill gravel esker complex northeast of Winnipeg; south-eastern Manitoba within the RMs of Hanover, Franklin, Stuartburn and De Salaberry; near the town of Beausejour; near the town of Richer. Overall, the population appears to be stable.

Western Spiderwort
(Tradescantia occidentalis)

Western Spiderwort grows on semi-stabilized sandhill prairies, found in the Routledge and Lauder Sandhills. Conservation Data Centre (CDC) staff have visited known locations frequently between 2002 and 2007, refining information on known locations to improve the quality of available information on area of occupancy and learning more about its habitat. During the course of these surveys, very little additional habitat was found that might be suitable for Western Spiderwort, and no new plants were found. The existing population appears to be stable, but continues to be threatened by Leafy Spurge (an invasive alien species) and by dune stabilization.

EXTIRPATED SPECIES:

One butterfly, three birds, and two mammals are listed as Extirpated in Manitoba. Some of these species (Grizzly Bear, Swift Fox, Pronghorn) are infrequently reported in the province. These visiting individuals have likely dispersed from established populations in adjacent jurisdictions but do not persist. Others, like the Trumpeter Swan, appear to be establishing themselves as rare but recently regularly breeding residents.

Birds

Greater Prairie Chicken
(Tympanuchus cupido)

Long-billed Curlew
(Numenius americanus)

Trumpeter Swan
(Cygnus buccinator)

Butterflies

Riding's Satyr
(Neominois ridingsii)

Mammals

Grizzly Bear
(Ursus arctos)

Muskox
(Ovibos moschatus)

Pronghorn
(Antilocapra americana)

Swift Fox
(Vulpes velox)

Going Forward — The Next Five Years

The wildlife challenges facing Manitoba in the next five years could be classified under two main categories – dealing with abundant species, like white-tailed deer, geese and some predators; - dealing with species at risk, like piping plover and boreal woodland caribou. The suite of current activities underway in each of those categories is articulated in the preceding pages. For the future we anticipate engaging even more with our current partners, whether they be other agencies, governments or non-government organizations, to better manage our collective efforts to reduce the impacts of human-wildlife conflicts, and to reverse the factors that place some species at risk of endangerment.

These challenges are not unique to Manitoba, but are faced by jurisdictions across North America. There are many innovative solutions being developed and we will be monitoring widely to ensure that the best practices arrived at are implemented in Manitoba as quickly as we can.

Another noteworthy wildlife challenge will be developing a new working relationship with First Nations and Aboriginal people to implement the policy of the Government of Manitoba to seek their input into the management of natural resources in their traditional use areas.

The next generation of the Conservation Data Centre's (CDC) Biotics application is expected within the next five years, and will be built on newer versions of GIS and database software that will allow the CDC to keep pace with continued improvements to NatureServe's biodiversity data model, to exchange information more easily and with greater frequency via the internet, and to better serve its information to stakeholders.

Distribution of information on rare and at risk species to interested stakeholders represents both a challenge and an opportunity to address in the next five years. Clients have come to expect quicker responses and better access to information online, via real-time databases and web-mapping services. At the same time, protecting the confidentiality of detailed locations of species at risk is key, both for the privacy of the landowner and for the species itself. A balance must be struck. The CDC will continue to tap the collective expertise of the NatureServe network to develop common, cost-effective solutions to this challenge.

The list of Species At Risk continues to grow as growing human populations consume more resources. The effort required to recover these species will increase. The Manitoba Government will continue to consult with citizens to implement recovery actions, especially on private land.

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